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EDITORIAL COMMENTS

Our Need for a Foreign Policy

WE have now been at war with Germany for four and a half years. From the military point of view, prospects of victory are sound and encouraging. By no means so encouraging is the view that is gradually emerging of what post-war Europe may well be like. During the first three years of war Britain—and later the United Nations—were strictly on the defensive, except in Africa. Actual questions of international reconstruction were then so remote that there seemed no need for a definite foreign policy. The peoples of the Continent looked to the Allies for freedom—which they wanted most of all—from German occupation and oppression—which they most of all detested. Personal liberty and the restoration of their cultural and national existence—that is what they longed for, and they realised that it could be secured for them only through an Allied victory. They understood that things could never again be quite as they had been before the war, that there would have to be some new international machinery for organizing and safeguarding peace; but they were less interested, I think, in the emergence of a Brave New World than in the restoration of a tolerably decent old world which no doubt they idealised in retrospect. In this period the United Nations confined themselves to principles; they spoke of the Four Freedoms to be guaranteed to every man; they concluded the Atlantic Charter. Throughout Europe hopes were strengthened, resistance to the common enemy was intensified. 1943 brought a series of defeats to Germany. On sea and in the air, in Africa and along the entire Eastern front her men were beaten, her projects were shattered. Her principal partner in Europe was driven out of the war. The Russians began to close in from the East, the British and Americans from the South; the continuing blockade and the threatened second front sealed the West. It is evident that, with the swiftly developing vision of Allied triumph, certain concrete issues are arising on the Continent which are fraught with the most serious moral, if not military, difficulties for the Allies. It is every bit as clear that our joint handling of these issues will determine the attitude of European countries towards the Allies, and especially towards Britain and the U.S.A., since these Powers have been the loudest in proclaiming the principles of international order and peace. This is even more true of Britain than of the United States because the peoples of the Continent have looked to Britain as the one

country which, throughout the grimmest hours of this world conflict held out against overwhelming German force, and also as the one Power among the "Big Four" that is to a large extent also European. A wise and enlightened leadership on the part of Britain could do more than any other political factor to restore Europe to order and prosperity. A policy of drifting would be fatal—fatal to ourselves and fatal for the Continent. And let us modestly remember that we did drift, and drift wickedly, in the years between the two wars, and that to drift is our natural inclination. At the present time German propaganda is making much of what it terms this drifting character of British foreign policy and interpreting it, where Eastern and Southern Europe is concerned, as a complete capitulation before Soviet Russia. We are in grave need to-day of a foreign policy that shall be *honourable*, taking full account of the pledges we have given, the pacts we have made and the principles we have enunciated; that shall be *consistent*, and no mere opportunist trimming of British sails to Russian or American breezes; that shall be *realistic*, facing problems as they are in reality and not as they may have been tendentiously presented by propaganda, whether that propaganda be foreign or our own.

The Future of Poland

THE dispute between Poland and Russia concerning Poland's Eastern provinces is more than a political difference between two Allied Powers engaged in a struggle against a common enemy. It is an issue that may very well divide the people of Britain deeply and fundamentally and that might call in question the very morality of the war. This dispute can be settled only through joint agreement or by force. A settlement by joint agreement is not practicable until the war is over though some temporary arrangement might and should be reached—of course through mutual consent. Any settlement imposed by the Soviet Government through force of arms could not, in decency and honour, be recognized by Britain. The word "dispute" is misleading. Bluntly, the position is the following. Soviet Russia claims the right to take over one-third at least of the territory and population of Poland. We are not declaring that Poland's Eastern boundaries are sacrosanct. The point is that they happen to be Poland's Eastern boundaries, that Poland is an Allied country, whose independence Britain has guaranteed and went to war to secure. There are clever gentlemen who tell us that what we guaranteed was Poland's independence and not her territorial integrity or that we gave Poland no guarantee at all against Soviet Russia. To such arguments Mr. Pickthorn replied, in the Foreign Affairs debate in the House of Commons (February 22nd and 23rd):

I do not think really that much in the way of legalistic argument about what our contract was, or in relation to whom, is of much use

to us now. . . . Shall we be clearly seen to have done for each State on our side everything possible, everything which was not strictly and materially impossible? And especially for each State to which the war came because of its reliance upon our promises and upon our general principles of conduct? If by such fidelity we retain the reliance of Europe, then everything may be won back, even after never-mind-what defeats we may have had to go through. If we lose that reliance, then I believe that everything may be lost, even after victory; and we shall be half lost if we once begin arguing about legal interpretations of our promises, or if we once begin doubting that we must do for fidelity everything that possibly can be done—using those words with extreme strictness.

In the same debate, Sir Edward Grigg spoke of "one of our besetting sins," namely "adopting in international procedure the habit, which is condemned in private life, of issuing 'stumer' cheques which will not be honoured when they are presented at the bank" Is our 1939 guarantee to Poland to be one of these "stumer" cheques?

The Situation

OPENING this debate, Mr. Churchill stated that "the British view in 1919 stands expressed in the so-called Curzon line which attempted to deal, at least partially, with the problem." This statement requires amplification. The "so-called Curzon line" was a rough and ready frontier, to the West of which the Allied Supreme Council authorized the Poles to set up a regular administration "without prejudice to later terms which may be designed to fix the final Eastern frontier of Poland." This last clause was repeated later in the same document (December 8th, 1919): "The eventual rights of Poland to territories situated to the East of the above-mentioned line are expressly reserved." While this Curzon line was fixed as a temporary frontier, hostilities continued between the Poles and the Bolsheviks. Those hostilities concluded, the present Eastern boundaries were established at the Treaty of Riga, in 1921. Between 1921 and 1939 they were never, I think, called in question. In fact, in 1920, in a note addressed to the Head of the Polish State and signed by Lenin and Chicherin, the Soviet Government spoke of a Polish-Russian frontier even further to the East which it declared would not be injurious to "the real interests of Russia." In view of the many editorials and articles on this subject and of the pernicious habit of pressmen and radio announcers of speaking of the pre-1939 Polish frontier, it will be well to recall the various statements and guarantees that were made and given in the summer of 1941, after the German invasion had put an end to the Nazi-Soviet Pact that was the basis of the German-Russian partition of Poland. On July 30th, an agreement was reached between the U.S.S.R. and Poland which declared in its first clause: "The U.S.S.R. admits that the Soviet-German treaties of 1939 concerning

territorial changes in Poland have lost their force." After this agreement had been signed at the Foreign Office in London, Mr. Eden handed the following note to General Sikorski :

In connection with to-day's signing of the Polish-Soviet agreement, I desire to take the opportunity of informing you that, in accordance with the provisions of the Treaty of Military Aid between Great Britain and Poland dated August 25th, 1939, His Majesty's Government in the United Kingdom has not undertaken any obligations to the U.S.S.R. which would affect the relations between that State and Poland. I desire also to assure you that His Majesty's Government does not recognize any territorial changes made in Poland since August, 1939.

On behalf of the Polish Government, General Sikorski made the following reply :

The Polish Government acknowledges the receipt of Your Excellency's letter of July 30th, 1941, and desires to express its sincere satisfaction with the declaration of His Majesty's Government that it does not recognize any territorial changes made in Poland since August, 1939. This corresponds to the views of the Polish Government which, as H.M. Government was previously informed, has not recognized any territorial changes made at the outbreak of the present war.

On paper the situation is perfectly clear. But since 1941, the Russian attitude has altered. Then, for a time, relations between Russians and Poles were very friendly. Hundreds of thousands of Poles were liberated by the Soviet authorities ; the inhabitants of Eastern Poland were regarded as Polish citizens. However, by 1942, it was impossible for the Polish Embassy in Russia to protect Polish citizens there ; and on January 16th, 1943, the Soviet Government informed the Polish Embassy that it was withdrawing the right of Polish citizenship from all such persons. Finally, on April 26th, 1943, the Soviet Government broke off diplomatic relations with the Polish Government in London. The occasion of this break was the quite legitimate Polish request for an impartial Red Cross enquiry into the massacre of 11,000 Polish officers in Katyn forest. At present negotiations are proceeding ; and it is evident that both the British and United States Governments are taking an active part in them. The Polish Government has suggested, for the time being, a divided Polish-Russian administration of Eastern Poland, provided that the cities of Vilno and Lwów are left in Polish hands. This not unreasonable offer has been rejected by M. Stalin who insists that the Poles shall immediately and definitely recognize the Curzon line as their Eastern frontier. This would be the equivalent of yet another partition of Poland, and indeed this much-quoted line is practically the dividing line of the Third Partition of 1795. In his speech Mr. Churchill adduced nothing but strategic reasons for M. Stalin's demands. "I cannot feel," he declared, "that the

Russian demand for a reassurance about her Western frontiers goes beyond what is reasonable or just." It is highly significant that during this debate on Foreign Affairs not one mention was made of the fact that a solution on these lines would hand over to Soviet rule close on ten million Catholics, half of them Poles of the Latin rite, and half Ruthenes, in communion with the Holy See.

Cognate Problems

THE attempt to solve this Polish-Russian conflict in favour of Russia has led the Allied leaders into a position which calls for critical examination. The Prime Minister admitted that he had agreed with M. Stalin that the Poles should receive compensation in the North and West: in other words, they would be given most of East Prussia and the whole of Silesia. The port of Königsberg the Russians apparently reserve for themselves, still on the ground of strategic necessity. There may be sound reasons for some territorial readjustment here. Poland ought to have direct access to the sea, and the corridor solution which obtained from 1919 to 1939, was not a very satisfactory one. But Mr. Churchill went on to announce that the Atlantic Charter would not apply automatically to Germany: she would not be allowed to appeal to it or to base any claims on its clauses. It is not to apply to Allied Poland—that is if her Eastern provinces be wrested from her by force; it is not to apply to enemy Germany except by courtesy of the Allies. One must ask what is this extraordinary charter that can be applied or not to peoples and situations just as the leaders of the United Nations deem fit. Not surprising therefore that 63 M.P.s tabled a motion, criticizing speeches of this kind which, it asserted,

brought the Charter into disrepute, depressed the spirit of considerable sections of the Allied populations, stiffened the support of the peoples of enemy countries behind their leaders, and are calculated thereby to prolong the war, thereby making the prospects of permanent peace difficult, if not impossible. It therefore urges His Majesty's Government to make it clear that the principles laid down in the Charter are of world-wide application.

To return to the problem of East Prussia and Silesia. Suppose these regions are handed over to Poland. There are two alternatives. Either the German population remains there, and you have a strong and embittered minority within the Polish body politic—a minority that would certainly be worked upon by German influence as were the *Sudetendeutschen* in Czechoslovakia; or you adopt more drastic methods and transfer the German inhabitants, lock, stock and barrel, to the German Reich, thus making room for millions of Poles from Eastern Poland. Leaving aside altogether the question of justice and humanity, think of the supreme chaos this would bring to Central Europe. Already it is clear that one of the most pressing of Continental

problems immediately hostilities are ended, will be the transfer of millions of prisoners of war and of foreign workers from Germany to their own homes. Then there are the German settlers in Polish homes and on Polish land—this policy has been deliberately fostered in the so-called *Warthegau* since 1939—and these the Poles will certainly insist must be expelled at once. Viewed quite practically, the suggestion is scarcely conceivable. Viewed on the ethical plane, it would be an iniquitous bargaining with the bodies and souls of millions of men and women, as impossible to justify as it would be impossible to achieve. War, especially modern war, has to be won by force of arms. If Right is to triumph, it must do so through the employment of Might. But there is always the danger that Might will have a disproportionate amount to say and that what began as a war of righteous defence may grow, and not always with deliberate intent, into an unlovely struggle of pure power-politics. To keep the edge of moral endeavour keen and bright is easier, maybe, in days of adversity when that adversity makes its heroic calls upon the finer spirit of man. It is ours to see, now that the bugles of victory are sounding in the distance, that this keen edge is not dimmed or blunted.

Balkan Questions

ANOTHER general subject on which considerable disquiet was evidenced during the Commons' debate on Foreign Affairs was the internal situation in Yugoslavia and Greece. Mr. Churchill had to admit that Greece was in a sorry plight. The various Greek resistance movements have been engaged in warfare with one another rather than in opposition to their German oppressors. Athens Radio—enemy-controlled of course—has a daily tale of atrocities committed by these organizations; the tale may be exaggerated, it is not wholly fictitious. Of Greece the Prime Minister made a statement which can be applied to several other countries. "There is the idea that powerful elements among the guerrillas are thinking much less of driving out the foreign enemy than of seizing the title deeds of their country and establishing themselves as the dominant party, irrespective of the views of the masses of the nation after the war is over." To what extent some of the blame for this is to be attached to the Allies for their failure to give adequate support to the legitimate Governments of Greece and also of Yugoslavia cannot easily be assessed. There is certainly risk in the policy openly enunciated by our own Government of supplying arms to any movements that will use them against the Germans. As the Prime Minister was compelled to admit in the case of Greece, and as is also evident in Yugoslavia, these movements are employing such arms against other people than the Germans. The partisan movement in Yugoslavia is fighting strenuously against German armies

and holding down several German divisions. At the same time, it has repudiated the legitimate Yugoslav Government and, for practical purposes, rejects the authority of the King. Mr. Pickthorn quoted an extract from *Tanin*, a Turkish newspaper, commenting upon the Moscow and London report that General Mihailovich was collaborating with the Germans. It ran as follows :

It is impossible for us to deny that the report took us by surprise. It is also very difficult to believe this report. Mihailovich did not hesitate to resist the German armed forces and did not even sacrifice his love for his country when the Germans arrested his wife and children as hostages. He was recognized by the official Yugoslav Government in London. Who is Tito? What does he represent? We do not know. He may be a republican president and thus reject monarchy, but according to the principles laid down by great countries, the people of any free nation have the right to adopt their own regime. Why did not Tito collaborate with Mihailovich, who was an official representative of the Yugoslav Government in London? The duty of all true patriots is to collaborate in the fighting against the enemy and to forget all internal problems.

Whatever the rights and wrongs of the Serb-Croat quarrel which has a good deal to do with the tension between mainly Serbian Chetniks and mainly Croatian and Slovene partisans, we think that little service is rendered to the Yugoslav national effort by editorials, such as that of the *Times* for March 14th, which declare that the attempt to keep Yugoslavia as a unitary State, directed and controlled from Serbian Belgrade, was a patent failure even prior to the war. Not sufficient notice has been paid to the altered relations between Britain and Turkey. The Turkish attitude has noticeably stiffened. We have suffered there a serious diplomatic setback. One reason is not far to seek. It is the sinister fact that the two Balkan countries on the Allied side are rent with violent internal strife so that prospects for the future are alarming indeed. Their national unity has gone ; a sense of order and discipline has gone with it ; and it is by no means clear in what guise and after what further struggles it will be found again. With this is joined the feeling that Britain and the United States have nothing but short-term policies in their Balkan dealings and the lurking suspicion that Soviet influence has most definitely come to stay.

That Wretched Word "Fascist"

MAY we once again protest against the imbecile employment of the term "Fascist"? Recently the Russian press has attacked King Peter and his Government as a "pro-Fascist clique." Surely the last charge you could bring against any Serb was partiality towards Mussolini's Italy. Fascism was an Italian experiment. It has now come completely to grief. A handful of sorry supporters still linger in German-occupied Italy, a pathetic shadow of the

overblown substance of yesterday. But the use of the term "Fascist" continues. Left-minded circles apply it indiscriminately—to all adherents of tradition and conservatism, to Catholics generally, to Franco and Salazar, to the Christian *Sinarquista* movement in Mexico—in fact to anyone of whose politics they do not entirely approve. It would be far wiser to speak of National-Socialism as the enemy. For National-Socialism is what it proclaims itself. It is an attempt to control and dragoon all elements within a State for the advantage of the Government of that State and, in its worst form, for the Government of that State in the hands of one single political party, as in Germany or Russia. May we borrow an amusing paragraph from our American contemporary, which bears the title of *America* :

Mary Jane, aged two, was punished the other day—for calling another child a Fascist. But why punish Mary Jane, aged two? The most amazing thing in recent American history is the growth of American Fascists, both in number and variety. We have simple Fascists and ex-Fascists and neo-Fascists and Nazi-Fascists and Communo-Fascists and clerical-Fascists and of course the Fascist dupes of clerical-Fascism and (surely, something new and vaguely disturbing) crypto-Fascists. The man who more than any man in the world is responsible for the Moscow Pact has often been called a Fascist. The men whose work made it possible for American troops to invade Africa with a minimum loss of life were called Fascists. The men who are successfully guiding military and political operations in Italy are still being called Fascists. The Pope has been called Fascist so often that we weary of denials. Republicans and Democrats and New-Dealers and Socialists and Communists and union officials and industrialists and Supreme Court Judges and Senators and Congressmen have been called Fascists. Our President has been called Fascist and will shortly be so called again. At least, for the definition she offered, Mary Jane, aged two, should have been granted a reprieve. "A Fascist," she said under parental prodding, "is anybody I don't like." She has the makings of a great controversialist.

The Occupation of Hungary

THE recent German occupation of Hungary was motivated by anxiety about the Russian advance into Europe and also by the suspicion that the Hungarian Government would give Germany no serious military assistance except in the defence of the actual Hungarian frontiers. German propaganda speaks of the move politely as destined "to give support to the Hungarian struggle against the Bolshevik danger, to secure the active mobilization of Hungary's forces, and to hold the positions that are strategically important." For some time now, the Hungarians have been dissociating themselves from Hitler's war, and claiming that their "war" was a war on its own, and not a part of the German plan

to master the Continent. Speaking late in February, the Hungarian Prime Minister, M. Kállay, declared :

We are the most peace loving nation in the whole world. Even the revision of the peace treaties was pursued by Hungary only by peaceful means and carried out in the same manner. Hungary wants to live in peace on this earth in a true Europe. She wants to continue the development of her ancient culture and to promote the freedom, equality and social welfare of her people.

Sincere words, with which we need have no quarrel. Hitler's smaller allies have been, all of them, forced into his ambitious schemes. The Hungarians were stressing this point of view in the Swiss press. According to these Magyar-inspired accounts, Hungary is the one country—among the satellites of the Nazis (with the evident exception of Finland)—that has passed no anti-Jewish legislation, that has retained a Parliamentary system and that has played no serious part on the Eastern front. Hungarian tradition, frequently labelled by its enemies as "feudal," has withstood any National-Socialist movement far better than the supposedly more democratic regime of neighbouring countries. The Berne paper, *Die Nation*, has an interesting account of life in Budapest, seen through the eyes of a German journalist. Some excerpts from this account merit the recalling. The writer speaks of his arrival at the railway station.

Even on my arrival at the station I got a rude shock. It was shortly after the New Year. The many newsvendors stood about in the station and offered their papers for sale, crying out the latest news. I do not understand Hungarian but I was continually able to pick out from what the newsvendors said the word "Roosevelt." I asked a gentleman to translate what the newsvendors were saying and was told : "They are boosting the paper because it carries the full text of Roosevelt's New Year message." I was amazed. Was I not in a country which is allied with the German Reich ? The Führer had also made a speech on the occasion of the New Year. But not a single newsvendor thought it necessary to direct the attention of the public to the Führer's speech.

Later the writer studied the bookshops. He was annoyed to discover there a Hungarian edition of "Mrs. Miniver" and also Sholokov's "And Quiet Flows the Don," to say nothing of many Jewish books long since forbidden in Germany.

As I was strolling along the streets I noticed a crowd of people at a street corner. What was it ? I was informed that a collection was being made for Dutch and Belgian children. So the Hungarians show sympathy for Dutch and Belgian children, but for our German children who have been bombed out our noble allies have not given a penny.

I wanted to go to a cinema which I knew of from a former visit. I asked at the box office when the programme began, but was told that there was no programme being shown that day. "Why, is to-day a special holiday ?" I asked. "No, but the Polish students

are holding a general meeting here." The town is swarming with Polish refugees. But don't imagine that they are interned. Not in the least. They frequent all places of entertainment in Budapest and even Budapest University has organized special courses for Polish students.

The *Neue Zürcher Zeitung*, for March 7th, emphasizes the Hungarian trust in Britain. "Although Hungary is at war with Britain, it is by Britain that she expects to be saved. Britain is officially Hungary's enemy, yet the whole Hungarian people looks on Britain as the guarantor of the future of Europe."

Thus two countries, two peoples separated by a whole Continent, confront each other. . . . From the East comes a new threat against Hungary; nevertheless she keeps a cool head because the men in whose hands the Government rests are convinced that Britain will remain true to herself and will not leave Europe and Hungary in the lurch. Hungary is not afraid of Britain as *arbiter mundi*.

A strange confidence, if you judge it by British press columns and the talk of politicians in Britain, but not so strange when you remember that the smaller Continental peoples, in East and West, look to Britain more easily than to the U.S.A., though this attitude in some cases is altering to our detriment, and far more readily than to Russia. The Hungarians are a people with traditions going back a full thousand years, and they turn naturally to the British as to a people with a like heritage of tradition and stability. It is well to recall that we are admired abroad, when and where we are admired, more for this stability than for the qualities which find a more glib echo in some of our foreign propaganda: as the country that still has something worth conserving than as the exporter of Left-wing panaceas. The Hungarians, be it noted, have behaved well to the Jews, despite Nazi pressure; they have treated Polish refugees with marked charity; indeed, Hungary is the one country on the Continent where there are still schools for Poles. None the less, the position of Hungary is difficult. In Transylvania—the land of dispute between Hungarians and Rumanians—the Germans have tended to favour the Rumanian claims, for the reason that Rumania was till recently of greater military importance. It seems now that Russia favours the same Rumanian claims to Transylvania, largely to appease the Rumanians for the loss of Bessarabia which the Soviet Government fully intends to annex.

• Further Balkan Developments

OUTSIDE of Greece and Yugoslavia, the countries of South Eastern Europe were drawing closer to one another, before the German armies took full military control of their territories. Hungary and Slovakia, for instance, were exchanging courtesies. The Hungarian paper, *Pester Lloyd*, stated on March 11th:

On the fifth birthday of independent Slovakia, Hungary expresses her good will and readiness to maintain relations. The first five years of Slovakia's independence have shown that, thanks to German assistance, she may confidently look forward to her future as an independent State.

This is in marked contrast to Hungarian press notices of a year ago. Tension continues between Hungary and Rumania. But Rumania was seeking touch with Turkey. The Bucharest paper *Viața*, for March 10th, claimed that Rumanian and Turkish interests were closely interconnected and that it was Turkey's national position that was being defended along the river Dniester against the Soviet armies. The Rumanian Prince Stirbey, an old enemy of King Carol, is at present at Ankara and, though he has no official status, he is attempting to consult representatives of the Allies. Closer even was the rapprochement between Hungary and Bulgaria. The Hungarian press and radio laid emphasis upon the Bulgarian army as the one unchallenged military force in the Balkans properly so-called and coupled with this the Turkish armies beyond the Straits. Bulgaria too has its peace envoy, in informal contact with the Allies. This is Professor Sevov who is in Ankara or Istanbul. The Allies have watched Bulgaria carefully; they know that she has given great assistance to Germany in the policing of the Balkans in German interests. Recently, the Bulgarian troops took over three more zones of occupation, thus releasing German soldiers for duties elsewhere. It is certain that the Allies will insist upon a Bulgarian withdrawal from all the territory seized from Yugoslavia or Greece. An article in the Swiss *Journal de Genève* for March 10th suggests that the Turks would like to play again an important rôle in the Balkans, for reasons both of prestige and security. They favour a federation of Balkan States—a concept opposed by Russia but acceptable to most of the Balkan countries, which are not anxious to be used as pawns by the greater Powers and think that, federated and united, they might exert a stronger influence in South Eastern Europe. The same article hinted that this Turkish policy would be quite acceptable to Britain :

Russian plans do not harmonise with the plans of the leaders of Turkey. On the contrary, they tend to isolate Turkey. It is therefore understandable that the Turkish President İnönü is not launching his country into a conflict, the risks of which are obvious and in which he would weaken Turkey's military potential. But it may also be asked whether his policy in the long run does not suit Britain's permanent interests in the Eastern Mediterranean. It appears that this is what Sarajoglu meant when he declared in September, 1943 : "The interests of the two countries (Britain and Turkey) do not link them for a limited time or even for a limited number of questions, but for many years and over the most widespread areas."

Italy

THE splendid advance of the Eighth Army across North Africa along with the achievements of the First Army and the American forces in Tunisia certainly caught the imagination of the world. Successes in Sicily added further lustre, and the heroic fighting from Salerno to beyond Naples continued this triumphant progress. Since then, Allied activity on the Italian mainland has been slowed down. Nature has opposed her barrier of mountains and bad weather to the Fifth and Eighth Armies. The landings on the Anzio beachhead were admirably planned and carried out, but they have not yet proved the prelude to an occupation of Rome. Was our military intelligence faulty? There is little doubt that the Allied authorities were misled politically. Propaganda has its dangers: and one of them is that you may be tempted to place too much reliance on what your own propaganda has constantly emphasized. Far too long we have talked to the Italian people along theoretical lines which had little reference to the actual situation inside Italy. The fact that Italians were weary of Fascism did not mean, as many Englishmen persuaded themselves it must mean, that they were longing for the Anglo-Saxons or for Anglo-Saxon democracy. The truth is that the majority of the Italian people were sick of the war and sick of Mussolini for leading them into the war; they were also sick of Germans and it is highly probable that they are now just as sick of the Allies. The notion that Southern Italy was swarming with "democrats" living for nothing so much as the emergence of ancient Liberal politicians like Count Sforza and Benedetto Croce was always childish and has shown itself both absurd and disastrous. What the people of Southern Italy are interested in is food and peace and the departure of the various foreign armies that are making their countryside a battlefield. No less than six political groups have been active in that portion of Italy that is under Allied occupation. Recently, the three groups nearest to the Left decided to stage a strike in protest against Mr. Churchill's declaration that they might be less amenable to the Allies than the regime of Marshal Badoglio. The strike they altered into a meeting in Naples. Meanwhile, the Soviet Government, which might give us lessons in political realism, has resolved not merely to recognize the Victor Emmanuel-Badoglio Government for the time being but is actually accrediting to it a Russian ambassador. Speaking of Italy, we cannot avoid reference to the destruction of the monastery of Monte Cassino. How nauseating were the British press assertions that no one loved art and ancient monuments more than the Allies and that their sorrow would indeed be intense were they compelled to do damage to historical buildings! General Eisenhower, it must be admitted, had sent round a sharply worded instruction to Allied commanders, warning them that great care should be taken to avoid

such destruction. "Nothing" he stated "can stand against the argument of military necessity. That is an accepted principle. But the phrase 'military necessity' is sometimes used where it would be more truthful to speak of military convenience or even personal convenience." The monastery of Monte Cassino, established by St. Benedict, was the symbol of that monastic influence which, throughout the dark ages after the break-up of the ancient Roman system, leavened and civilized the Western world. Now it has been rudely and violently destroyed. Looking backwards, it is not easy to convince oneself that the reasons alleged to justify this military action were sufficient or even genuine. The abbot who was in the monastery during the raid has declared apparently—I say "apparently" because his statement was broadcast by the enemy-controlled Rome Radio—that no German soldiers were inside the monastery. No anti-aircraft fire was observed from the monastery buildings, and the only casualties were Italian civilians, sheltering within the monastery walls. There has been reckless bombing of Papal property in Castel Gandolfo, with considerable loss of Italian lives; there have been damage and casualties in at least one raid upon the Vatican City. War is a grim business. That we realise, and genuine military necessity may involve the destruction of churches and artistic monuments. But even in war, we must look beyond to-day to to-morrow. It would be a sorry and shameful experience to learn when the war is over that, in point of vandalism, we were accounted not the least bit better or more considerate than our Nazi adversaries. Finally, there is this blunt challenge. We destroyed Monte Cassino on the plea of military necessity, on the grounds that its possession and use by the German forces were holding up our advance. But four weeks after that act of destruction, we were in exactly the same position as before; its destruction had not helped us to make any appreciable advance.

The Mediterranean

THIS war has brought out more clearly than did the last the great strategic importance of the Mediterranean. Had we lost control of its Eastern waters during the winter of 1940-41, events in the Near East, and indeed the whole direction of the war, might have taken a very different turn. The defence of Malta was not only the gallant story of an island resistance to attack; it was the symbol of Britain's determination not to let the Mediterranean go. Since then, great changes have taken place but the importance of the Mediterranean has not declined. Indeed, it has increased. Rapid developments of which little is reported in the world's newspapers are being realised. American interest has been awakened. This may be aptly summarised in the words of Mr. Hore-Belisha from the already quoted Foreign Affairs debate:

Even before the United States entered the war, she was pushing the shield of the Monroe doctrine further Eastwards and fortunate indeed it was for us, that this was the case. To the Caribbean Sea—to the West Indies—then to Greenland and Iceland, and ultimately to Suez, to the Red Sea and Eritrea. Is it conceivable that the aerodromes so elaborately constructed, and the ground staff of a connection which enables the world now so conveniently to be circumnavigated, are to be disrupted at the end of the war? Is that conceivable? Is the whole system, necessary for the security of the United States and the discharge of her responsibilities, to be uprooted? Is the United States going to pick up her marbles and go home? If anyone were tempted to reach that conclusion, he would find a corrective to it in the permanent stake which is being inserted in Arabia and the neighbouring countries. This is the natural biological urge which drives all nations forward. A pipeline is to be constructed by the United States Government 1,250 miles long at a cost of 160,000,000 dollars from the Persian Gulf to the Mediterranean, and the declared official purpose—there is no concealment in these matters—is to sustain the United States Navy and Air Force not only in war but in peace, and to support the United States foreign policy. America is following in the twentieth century the policy which we followed in the nineteenth century. That is very fortunate for us if the tendencies are frankly realised.

So much for interest in the Mediterranean from the Far West. Now for the East. Russia too is extremely interested in the Mediterranean. It is Russia that has given the fullest measure of recognition to the Algiers French Committee. It is Russia that has first of all accredited a regular ambassador to the Government of Victor Emmanuel and Badoglio. And yet this is no new Russian policy. Throughout the second half of the nineteenth century Russian eyes were turned towards Constantinople and towards the Dardanelles as the gateway from the Black Sea to the wider Mediterranean waters. The support given by Britain to Turkey was designed to prevent Russia developing into a Mediterranean Power. The American statement, later to be countermanded by Mr. Churchill, that the Allies proposed to hand over one-third of the Italian fleet (or its equivalent) to Russia was an indication of this interest. For the ships of the Italian Navy, specially constructed for Southern waters, would have been of little value in the Arctic Ocean or the Baltic. Nazi propaganda was not slow to stress the consequences of this request and offer. The number and class of ships to be ceded were carefully mentioned, and it was added that the Yugoslav partisans had offered to the Russians the use of the port of Cattaro or Kotor on the Adriatic coast. Nor must it be forgotten that this renewal of Russian interest in the Mediterranean has much to do with the stiffening Turkish attitude towards the war.

The New Chinese Constitution

TURNING to the Far East, there is much encouragement in the speeches made by the Catholic Bishop Yu-pin, Vicar-Apostolic of Nanking, and a member of the Chinese National Council.

Speaking and writing in the U.S.A., Monsignor Yu-pin has declared that China is fighting a double war : externally against a totalitarian enemy, internally against the lust for power. China's chief contribution, he stated, will come from the fact that the people of China are inherently democratic. He quotes the old Chinese proverb : "The king is the boat, the ordinary folk the water. The water can support the boat or capsize it." The first article of the New Chinese Constitution informs us that the "Republic of China is a San Min Chu Republic." This means that post-war China will be established on the three principles laid down by Sun Yat-sen. The first of them, Nationalism, aims at making China an entirely independent State, free from foreign control. And here it must be interjected that European observers who are or have been in China during the war report a swift growth of national feeling—perhaps too swift a growth—with its concomitant intolerance of foreigners, particularly Europeans. The second principle, Democracy, is to give China a State in which its sovereignty will be vested in the people. The third principle, Livelihood, is to improve China's social and economic systems so that all its inhabitants will find the means of gaining a living and securing their existence. Passing on from these general principles, the Constitution deals with more specific questions : and these the Bishop claims will be found, clause after clause, in full harmony with the social teaching of the Popes. Article 121 reads, for example : "The State may, in accordance with law, regulate private wealth and enterprises when such wealth and enterprises are considered detrimental to the balanced development of the national economic life." Parallel with this, Bishop Yu-pin quotes from *Quadragesimo Anno* : "The riches that economic social developments constantly increase ought to be so distributed among individual persons and classes that the common advantage of all will be safeguarded." *Rerum Novarum* emphasizes the obvious truth that "neither capital can do without labour, nor labour without capital." Article 125 of the New Constitution states that "Labour and capital shall, in accordance with the principles of mutual help and co-operation, develop together productive enterprise." Articles 124 and 128 include the following sentences :

In order to improve the workers' living conditions, increase their productive ability and relieve unemployment, the State shall enforce labour protective policies. Women and children shall be afforded special protection in accordance with their age and physical condition.

In order to promote agricultural development and the welfare of the farming population, the State shall improve rural economic and living conditions and increase farming efficiency by employment of scientific farming.

The State shall give suitable relief to the aged, feeble or disabled who are incapable of earning a living.

Reading through these extracts, one might be tempted to exclaim, "State, State, State ; there it is again. Are there not dangers latent

in such clauses of a Chinese National Socialism?" Probably there are. But it may and must be said that there are evils in the Chinese system that require immediate remedies, that poverty and insecurity have to be dealt with on the largest possible scale. China too is a sub-continent rather than a country, with wide differences of race and speech and social habits; she is threatened not only by the Japanese in the East but also, at least culturally and politically, from the Soviet Far Eastern States in the North and West. Unity and reconstruction are the two first desiderata, and it may well be that in order to secure these two, greater emphasis must be laid upon "State, State, State" than Christian thought would care for. The sections on education indicate that great attention will be paid to this in the future. All children between six and twelve are to have elementary education free of fees; all persons above school age who never received such education may have some adult education, again free of charge; finally, article 137 provides that "education appropriations shall constitute no less than fifteen per cent. of the total amount of the budget of the Central Government, and no less than thirty per cent. of the total amount of the provincial, district and municipal budgets respectively."

The Church and Science

THE four articles which make up the main body of this number were originally prepared for a Summer Congress at Edinburgh in 1943. Their general theme is that of "The Church and Science," an examination of the relations between Science and Religion in the past, a review of the age of controversy, Science versus Religion, with some indications how that deep-seated and frequently embittered controversy may now be treated and maybe solved. Two of the four papers are, in part, historical. They are contributed by Dr. F. Sherwood Taylor, M.A., B.Sc., Ph.D., Curator of the Museum of the History of Science, Oxford, and by Professor E. T. Whittaker, F.R.S., Sc.D., LL.D., Professor of Mathematics in the University of Edinburgh. A third paper is from the pen of Fr. Ivo Thomas, O.P., who is chaplain to the Catholic students in Edinburgh University, and it deals with the mental and apostolic attitude which the young Catholic ought to adopt with regard to science and the scientists. Fr. J. Leycester King, S.J., Ph.D., Professor of Rational and Experimental Psychology at Heythrop College, Chipping Norton, is the author of the fourth and final article which reviews the various spheres of human activity to which science can aptly be applied by the Catholic of to-day. In order to preserve the continuity of the four articles, they are here reproduced as they were actually delivered. The Summer Congress, of which they formed the intellectual backbone, was organized by the Newman Association that is doing yeoman service in the cause of Catholic higher studies.

THE CHURCH AND SCIENCE

THE last occasion on which I visited this country was seven years ago, when I travelled to Glasgow in order to give a lecture on *Galileo and the Freedom of Thought* to the Rationalist Press Association. I was not an expert on Galileo, and I got up the subject for the occasion. When I came to go further into the matter and to consult such original records as have survived, I found to my surprise that most of the Protestant and Rationalist accounts were full of mis-statements which could hardly be less than intentional, and that the Catholic accounts, if not entirely uncoloured, were far more accurate. Moreover it seemed to me, as it seemed to T. H. Huxley when he read up the same subject, that "the Pope and the cardinals had on the whole the best of it." So interested did I become, that I wrote a book, which, now as a Catholic, I would wish to modify only in very trifling respects, and which the Rationalist Press, with scrupulous fairness, consented to publish, though it was not what they might have expected, and very little to the taste of their die-hard readers. But unlike Huxley, I did not remain in my former opinions, for the small insight I gained into the operations and the doctrines of the Church led by a seven years' progression to the step I took some eighteen months ago. It is not my purpose to relate my personal history, nor, as I might, to point out the singular providence of God who used the Rationalist Press Association as an agent for my conversion; but rather to point out the disservice which the anti-Catholic factions did themselves by telling lies or suppressing truth about matters of history. What is sauce for the goose is sauce for the gander; and the moral of my tale is that we shall do our cause a great deal of harm if we falsify, suppress, or refuse to discuss, any matters that appear to raise difficulties between the Church and the man of science. If the latter has one special virtue, it is a strong regard for truth—a lover's regard, for although he has the greatest esteem for it, he often fails to discern its character.

For that reason I am not in agreement with those who brush aside the standard difficulties with some such phrase as "We don't bother about the Old Testament: what really matters is the New." What is required is an exact statement of the Catholic position with regard to these matters of conflict, so that men of science may see at once what we believe about the first chapters of Genesis, and "the credibility of Joshua and the edibility of Jonah." Many good people have explained with great clearness that there *can be* no disagreement between those entities which we somewhat indistinctly characterise as Religion and Science: on the other hand we know

in fact that at many periods of history, and never less than in the last century, something that looked like, sounded like, and felt like a fight, has been going on between them.

The truth is that religion and science are words, and both of them are words which in common speech, both now and in the past, have meant several different things. Both of them do, or at least may, include (1) a *body of knowledge* and so-called laws, (2) a *method* of considering the objects of man's perception, (3) a *view of the world* that varies from a working hypothesis to profound conviction : and in fact there is and has been conflict in all three of these aspects.

Let us first consider the question from the aspect of knowledge.

As we all know, the Holy Scriptures and the traditions of the Church enunciate certain propositions which appear, *prima facie*, to be matters of historical fact,—*e.g.*, that the human race has sprung from a single pair : that Joshua caused the sun to stand still ; that Esther succeeded Vashti as Queen of Persia, that Jesus was born at Bethlehem when Herod was king. . . . Science also claims to give opinions concerning such matters. Thus palæontology or biology might adduce facts which could be interpreted as evidence against the origin of the human race from a single pair : a modern astronomer would probably express the strongest views concerning the sudden arrest of the earth in its rotation : archæologists might find documents which enumerated the queens of Ahasuerus but made no mention of Esther, and a papyrus might be unearthed from the sands of Egypt giving an account of Our Lord's life very different from the accounts given by the evangelists.

In any of these events we would be faced with a conflict of testimony, and we should require to include the new evidence and our former belief in a scheme in which they would not be in conflict. To quote words which were used by Galileo, "From the Divine Word the Sacred Scripture and Nature did both alike proceed"—and so they cannot truly disagree. This is a fundamental proposition to which we must assent : but it is not correct to say that, except very indirectly, "From the Divine word Sherwood Taylor's interpretation of Scripture and H. G. Wells' account of Nature did both alike proceed" and there is the field of conflict.

Men very often disagree about matters of fact and their interpretation. Scientists differ among themselves on many such matters ; and this although, nay because, they would be the first to acknowledge that there can be only one scientific truth about a natural phenomenon. So in the case of an apparent conflict between science and religion, a Christian philosopher has a clear duty ; namely to do as other men do in similar cases—that is, to investigate the matter further without alarm or misgiving, and if he cannot resolve the contradiction, to suspend judgment. He must very carefully enquire into the Scriptures with a view to discovering the intention of the sacred

writers, and endeavour to find out how far their assertions can be read as scientific fact and how far they are accommodated to the minds of those through whom they were written and to whom they were addressed,—how far they are parables intended to be true in ethics but poetical in fact. On the other hand we must also enquire into the historical or scientific evidence which appears to conflict with the Scriptures, asking ourselves whether it be approximate or accurate ; guess-work or measurement ; observation, inference, or speculation. There is in consequence an enormous field for the exercise of judgment in any case of apparent conflict of Science and religious doctrine. Every case must be faced, and we are neither entitled to refuse to consider any of the words of Scripture, nor any scientific evidence which appears to be worthy of consideration.

As I have already said, it is common knowledge that controversy between scientific men and churchmen has been bitter during many periods of the Church's history. My intention is to survey the general history of these difficulties, with a view to discovering how the problems in question have been so mishandled as to give rise to bitter controversy.

Since both are of the nature of truth, it is clear that pure accurate science and pure religion cannot conflict in the sense of being unable to co-exist in the same mind at the same time ; and it would appear that all cases of such conflict are due to one party importing into their science or religion something which does not logically flow from the legitimate data.

Two thousand years is a long time, and through all these years the Catholic Church has been in contact and relation with science of different kinds, and when science has been vigorous, there have always been problems to be solved. From the first to the fifth century the Church had to face some degree of conflict with Greek science and philosophy in their decadence. From the fifth to the twelfth century science ceased to be of importance in the Western world. In the 13th and 14th centuries came the assimilation of much of the Aristotelian philosophy and—incidentally—of incorrect Aristotelian science. In the 16th and 17th century came the need to replace obsolete Aristotelian science by the new experimental science, and to replace an obsolete cosmology, closely, but far from indissolubly, linked to the teaching of Churchmen, if not of the Church. In the 19th century came the massive attack of Rationalism on all forms of religion and most directly and specially upon the Catholic Church.

The first conflict of Christianity and Science arose as soon as the Gospel was preached to the educated Gentile. Greek science in the first century A.D. was extensive, if not over-accurate. It included a fairly accurate positional astronomy (much bound up with

astrology) ; an astonishing achievement in mathematics ; a considerable knowledge of anatomy ; some botany and zoology. With all this were linked various theories, notably cosmological views, which were chiefly geocentric ; and also theories of the constitution of matter, —notably the four-element theory perfected by Aristotle, and the atomic theory of Democritus and his followers.

This whole scientific view of the world was, in turn, bound up with philosophical views concerning being and the soul and the nature of the gods. So we have to remember that in the early period of the Christian Church, natural science was not a neutral objective account of material events, but was in fact invariably linked with a philosophy—a theory of the cosmos. Scientific men in classical Greece were philosophers, and their science was a part of their philosophy : thus it is not possible to separate the physical views of Plato or Aristotle from their theology. In the pagan world natural science was studied by a learned class as a part of a whole knowledge of things, deduced on rational (not necessarily mechanistic) grounds without the aid of revelation. It is obvious that the new Christianity could not accept Greek philosophy as it stood ; and the earliest records—the epistles of St. Paul—show us the conflict beginning. At Athens “certain philosophers of the Epicureans and of the Stoics disputed with him. And some said : What is it that this word sower would say ?” (Acts xvii. 18). Only the trained philosopher had the right to speak. This notion, that the knowledge of Salvation was with the wise, St. Paul does not cease to combat. To the Corinthians he said that “seeing that in the wisdom of God the world, by wisdom, knew not God, it pleased God, by the foolishness of our preaching, to save them that believe. For both the Jews require signs, and the Greeks seek after wisdom. But we preach Christ crucified : unto the Jews indeed a stumbling block, and unto the Gentiles foolishness : but unto them that are called, both Jews and Greeks, Christ, the power of God and the wisdom of God” (I Cor. i. 21-4).

To the Galatians. “But now, after that you have known God, or rather are known by God : how turn you again to the weak and needy elements which you desire to serve again. You observe days and months and times, and years . . .” (Gal. iv. 9).

To the Colossians. “Beware lest any man cheat you by philosophy and vain deceit ; according to the tradition of men, according to the elements of the world and not according to Christ” (Col. ii. 8).

This opposition between Christianity and philosophy, which included science, remained undiminished and was indeed accentuated in the 2nd and 3rd centuries. Such a book as the *Refutation of all Heresies* written by Hippolytus about A.D. 220 gives us a clear idea of the way science presented itself. At this time a profusion of systems purported to combine Jewish or Christian doctrines with philosophy and science. Constellations were taken as representing personages

of Holy Scripture ; Cepheus was Adam, Cassiopoeia was Eve, Perseus the Logos, and so forth. Other systems adopted complicated numerical schemes, dividing up all the principles into sevens, e.g., Mind, Truth, Word, Life, Man, Church, and the Father. Others again divided everything into triads. Some again attempted to harmonise astrology and Christian doctrine ; others theorised about brain structures and life (as do we). Others again used juggleries with a scientific or technical basis, as we are told that some of the spiritualists do to-day. It is clear that if the Church had allowed herself to countenance these windy heresies she would have been lost, and her history indeed is the continued rejection of what nobody will ever regret was rejected.

But the first result of this adequate analysis and rejection of what purported to be and was not science, was an undue prejudice and the almost total rejection of Greek science and philosophy. Hippolytus had distinguished between the wisdom of much of Greek philosophy and the folly of the compilers of heretical systems, but in the works of Lactantius (fl. c. A.D. 300) we find the pendulum has swung too far. He recognises perfectly clearly and correctly that natural philosophy is *opinion*, whereas what has been revealed to the Christian is true *knowledge*. He is not a sceptic, for he says, "Where then is wisdom? That you should neither think that you know everything, which is an attribute of God ; nor that you know nothing, which is an attribute of a beast. For there is a middle path of knowledge conjoined and tempered with awareness of ignorance." He very justly points out that such theories as the atomic hypothesis of Democritus and the existence of the Antipodes are inferences which go beyond what is certified by observation, but he does not appreciate the strength of the arguments which, even in antiquity, had been advanced for them, and so has come to be known as a flat-earthier, and a byword of the rationalist ; all of which is unjust, for he only maintained that we had no certain knowledge that the underpart of the earth was like the part known to us. We have our counterparts of Lactantius to-day, Christians who are quick to cavil at individual pieces of scientific evidence without appreciating their part in the whole. Thus we have those who discover faults in individual pieces of evidence for, let us say, the theory of evolution, and think by so doing they have appreciably diminished or neutralised the force of the multiple convergent indications and analogies that confirm it.

In the next century, near A.D. 400, the question was advanced almost, if not wholly, to its modern state by one who was a philosopher and as much a man of science as any of his time, in addition to being the greatest of theologians,—I mean St. Augustine, Bishop of Hippo. As one versed in Greek philosophy before his conversion, he understood the difficulties that faced the educated man of his time when confronted with the apparent difficulties of the book of Genesis,

and in a famous passage, rarely quoted *in extenso*, he sets out the whole matter most clearly.¹

38. For suppose that in the text which runs "God said, let there be light and there was light" one man understands that a corporeal light was made, and another a spiritual. That there is a spiritual light in a spiritual creature, our faith does not doubt : and that there is a corporeal light of the sky or even above the sky or prior to the sky, which light night could follow, is not contrary to faith until it is refuted by most certain truth. And if it came to be so refuted, it would not be the divine scriptures that held it, but human ignorance that supposed it. And if true reasoning had shown this latter view to be true, it would still be uncertain whether by those words quoted the writer of the sacred books intended this, or something else not less true. Because, if another text of his discourse proved he did not intend it, the other thing, which he did wish to be understood, will not therefore be false, but also true and such as may be more usefully known. But, if the context of Scripture is not repugnant to the writer having wished the latter view to be understood, it will still remain to be questioned whether he could not have intended the other also. And since, if we find another such interpretation, it will not be clear which of the two he meant, it will not be improper to believe that he intended both if certain circumstances testify to both opinions.

39. For it very often happens that there is some matter concerning the earth, the sky, the other elements of the world, the motion and changes or even the size and distances of the stars, of certain eclipses of the sun and moon, the circuits of the years and seasons, of the natures of animals, fruits, stones and other things of the sort,—that there is something concerning these which one who is not a Christian may know in such a way, as to hold it by very sure reasoning or experience. It is, then, most unseemly and pernicious, and moreover most sedulously to be avoided, that any unbeliever should hear a Christian, who appears to be speaking of these things in accordance with Christian writings, talking such nonsense, that, when he sees him, so to speak, completely astray in the heavens, he can hardly keep a straight face. And it is not the deriding of the man's mistake that is so harmful, but the fact that our sacred writers should be believed by outsiders to have written such stuff, and should be reproached and rejected as ignorant, to the great mischief of those, with regard to whose salvation we have quite enough to do already. For when unbelievers understand that one who is numbered among the Christians is in error in a matter about which these unbelievers know best, and is supporting some foolish opinion from our books : how are they going to believe what those books say of the resurrection of the dead and the hope of life eternal and the kingdom of heaven, seeing that they think that these books have written falsely about matters which they themselves can apprehend, whether by experience or by indisputable mathematical reasoning. It is impossible to state the injury and vexation brought upon their prudent brothers by these rash presumers ; for, when they find themselves beginning to be censured and convicted of unsound and fallacious opinions by people who do not

¹ *De Genesi ad litteram*. Lib. 7. Cap. XIX. §§38-41. The author has not been able to discover an English translation and, with diffidence, presents his own version.

acknowledge the authority of our books as proofs, they seek to defend what they have said with most irresponsible rashness and most open falsity, by putting forward those same books as evidence, or even reel off a lot of words from memory, which they think will have some force as testimony, though they do not understand what they are saying or the matter they are discussing.

40. And yet more dangerously do some weak brothers err, who, when they hear those impious wicked men arguing subtly and at length about the mathematics of celestial bodies or the elements of the world, give way, and with a sigh esteeming these people to be much superior to themselves, and thinking them to be great men, go back to books of the most salutary piety with distaste, and scarce with patience can apply themselves to those they ought to drink of sweetly ; shuddering at the roughness of the ears of corn and gaping at the thorns of the flowers. For they do not give themselves the opportunity to see how sweet is the Lord, nor are they hungry on the Sabbath ; and though they have received power from the Lord of the Sabbath to do so, they are slow to pluck the ears and to continue to rub them in the hands and purge the husks, until they come to the food.

41. Someone will say what is all this grinding and threshing and winnowing of a discourse about ? Why are all these things yet lying hid in your questions ? Tell us one of these which you maintain can be understood many ways. To which I answer that I have sweetly attained that food, whereby I learnt not to have respect to any man in answering according to the faith what ought to be answered to men who choose to traduce the books of our salvation ; so that I may show that, *whatever* they can demonstrate about the nature of things by *true* documents, *that* we can show is not contrary to our writings. And whatever they may *advance*, or even *demonstrate* by some means, in their volumes as *contrary* to our writings (that is, to the Catholic faith) we will without doubting believe to be most false ; and so hold fast to our Mediator, in whom are all treasures of wisdom and knowledge ; so that we shall neither be led away by the loquacity of false philosophy or frightened by the superstition of false religion. And when we read the divine books, with such a host of true thoughts, drawn out of such a few words, and so full of the health of the Catholic Faith, we should most prefer that sense which he whom we read appears certainly to have held. And if indeed this remains hidden from us, yet we know it must be something that the context of Scripture does not oppose and something which accords with true faith ; and if indeed the context of Scripture cannot be treated of or discussed in this connection, at least we know that the sense of the passage is only what sound faith prescribes. For it is one thing not to divine exactly what the writer intended, and quite another to depart from the rule of piety. He who avoids both gathers the full fruit of his reading ; but if both cannot be avoided, even if the intention of the writer remains uncertain, it is not useless to have arrived at an opinion agreeable to sound faith.

The work of Augustine closes the controversy for many years for during the so-called Dark Ages there was small contact between the Church and Science, because there was extremely little science

in the Western World. What little astronomy and medicine survived, was like all other learning preserved by ecclesiastics—the only learned. Science at this period was not dead or even dormant, for it was flourishing exceedingly in Islam, but only where this and the West met, as in Sicily and in Spain, had it any contact with the Church. The Eastern Church at Byzantium was however in close contact with the Greek Science there preserved, and although little or no active scientific work was done, to be acquainted with scientific learning was considered by no means unbecoming to a Christian.

In the XIIth—XIVth century a new phenomenon appeared in the West, namely the assimilation by the Church of pagan learning, including philosophy and science. What seemed important to the men of the time was to establish a *complete Christian philosophy of the universe*; the materials of this were the Scriptures, the traditions of the Church and the writings of the Fathers on the one hand; and the works of the Greek philosophers, notably Aristotle, on the other. Aristotle's logic, psychology, ethics and metaphysics were of the first importance for this task. But Aristotle's works contain a great deal of science and much of it is mingled with his philosophy. Thus his views of God are intimately linked with his view of the nature of the Cosmos, and hence with his quite erroneous views about motion and the vacuum. So much of the work of Aristotle was obviously true and far in advance of the knowledge of the age, that there was little disposition to carry out critical experiments to examine the foundations of his science. St. Thomas and his fellows were, in fact, inclined to build rather than to pull down.

The result was the magnificent structure of Thomistic philosophy and theology in which was embedded and entangled an inferior system of astronomy and some very false physics and physiology. This science can be detached from Thomistic works without affecting them in any essential, but the fact remains that as a part of the official philosophy of the Church, though not as a part of its doctrine, were included certain false or at least inadequate scientific theories.

This was almost inevitable. Once Vesalius, Paracelsus, Galileo, had taught us to be critical, it became easy to examine the foundations of natural knowledge, but in the XIIIth century the discipline of observation and experiment was scarcely existent. There were men who might have arrived at it. St. Albert (Albertus Magnus) was one who could report accurately on birds and beasts and insects, and distinguish what he had been told from what he had seen. Roger Bacon, too, realised that scientific assertions should be checked by observation, but the method of the age was to gain knowledge from books of authority—and whose authority, outside the sacred writings, came near to that of Aristotle?

Thus it was that the XIIIth century, which welcomed science together with the rest of Greek learning, did not know how to pursue

it, and made the capital error of importing into Catholic teaching, if not into definite belief, information about nature which they had not checked and which was in fact largely incorrect. Accordingly any attack on Aristotelian science seemed to those whose most sacred and cherished knowledge was expressed in terms of Aristotle's philosophy, to be at least a dangerous threat to religion. There were, of course, many acute persons in the Church who saw quite clearly that it was not possible that matters of physical fact should ultimately conflict with the defined truths of the Christian faith. But, in the XVIth and XVIIth centuries the greatest part of the hierarchy was both unlearned in natural science and very conservative about innovations, and consequently we find the Church fighting a losing battle for Aristotelian science.

When Copernicus published his great work in 1543—a work which was plainly contrary to Aristotelian science and to the popular plan of the universe—little or no opposition was roused, for the threat to Aristotle was not as yet serious : Copernicus had set up a daring hypothesis, but scarcely anyone believed that what he said was literally true. Copernicans became commoner at the end of the XVIth century. Digges, Gilbert, Bruno, Kepler, Galileo may be named among them. Digges and Gilbert suffered nothing in this country, always notable for its tolerance of or indifference to scientific opinions. Kepler was threatened by the Protestant theological faculty at Tübingen—and had to take refuge. Bruno's fate we know well enough, but it seems quite impossible to regard him as having suffered for his Copernican opinions. There were numerous charges of heresy against him, and if the Copernican system had been regarded as heretical and action taken against Bruno on this count, it would not have been necessary more than twenty years after to enquire of the Holy Office whether it were heretical or not.

The case of Galileo appears to be the only one which has turned on the supposed heretical character of scientific opinions. It has been scandalously misreported, and if the Catholic historians have been inclined to minimise the unwisdom or injustice of the Church, the Protestants and Rationalists have gigantically exaggerated it. The story is a long one if it is properly told. The essence of it is that Galileo made certain astronomical discoveries that led him to assert the Copernican view, that he was unwise enough, when attacked, to propound his views on the interpretation of Scripture ; and that in 1616 the essentials of the Copernican system were declared by the Holy Office to be rash, unsound, and in part heretical. Galileo was ordered not to hold, teach or defend those opinions. After some years he published a work which purported to attack the Copernican views, but was, in fact, a strong defence of them. He was summoned before the Inquisition on the charge of disobeying the

order of 1616 and made to recant his opinions : for the rest of his life he was confined to his house, but otherwise had full liberty.

So brief an account cannot possibly give the complex and disputed facts of the case ; but here we may look, not at the intrigues, counter intrigues and personalities, but rather at the ultimate question, namely, how there came about this unhappy situation that has caused so much scandal. No one has any doubt now that the Copernican system was not heretical : where was the mistake ? We do not know what happened in the deliberations of the consultors of the Holy Office, but the case advanced against Galileo by his adversaries, was based on

- (1) The alleged inconsistency of the Copernican hypothesis with certain texts of Scripture,
- (2) The unanimous opinion of the fathers of the Church as to the geocentric meaning of the above texts.

In the first respect we can only say that the consultors acted very strangely and in a manner far removed from St. Augustine's counsels. They were presumably obsessed by the supposed pre-eminence of metaphysical arguments and they clearly did not believe that there had been a true demonstration of the Copernican view—as indeed there had not, for many of Galileo's arguments were unsound and at best astronomy could do no more than render it *probable*. But they acted very unwisely in assuming that a true demonstration of a heliocentric system would not be given—and Newton's *Principia*, seventy years later, came as near to such a demonstration as is possible for science. The consultors decided a question of fact with the aid of a few slender texts of Scripture, which were capable of other interpretations. No doubt they gave too much consideration to the apparently indissoluble union of Aristotle's scientific work and Catholic doctrine—a union which only existed because of the uncritical methods of XIIIth century science.

The second point which seems to have been advanced, was the universal agreement of the Fathers in the geocentric opinion. All of course did interpret these texts geocentrically, because that was the natural assumption in the times they lived in ; for there was then no need to try to accommodate the Holy Scriptures to the half forgotten eccentricity of Aristarchus of Samos, who (a few folks knew) had asserted that the earth rotated and went round the sun. The Church did in fact very soon recede from its anti-Copernican views and was permitting the teaching of Copernican astronomy within some twenty years or so. And the lesson was learnt : great circumspection having been used about speaking in too dogmatic a manner about any of the numerous difficulties that came up in the XIXth century, the chief of which is the problem of the origin of man.

Many of us feel at times that we should like to be told exactly what the Church would have us believe or teach about Evolution ; but how much wiser is the leaving of this and other such questions without comment, pending a settled state of scientific knowledge ! The view of St. Augustine, that the deposit of faith is true and potentially reconcilable with correctly observed scientific fact is the sound one ; and, in accordance with it, each of us can examine the works of the evolutionists of his age and say " This is observation of such a degree of reliability : this is sound deduction : this is mere conjecture." Likewise he can examine the book of Genesis and consider the weight that has to be given to the various interpreters and to the responses of the Biblical commission concerning it (which themselves leave no little room for interpretation). Then he may form his synthesis—or leave his problem unresolved. If he has to teach, let him present the evidence and conclusions correctly, and state the difficulties, and the correct attitude of suspense to be adopted. Nothing is worse than an attitude of fear or a lack of candour, both of which confess the weakness of one's own faith. There has recently appeared a short book, *The Bible and the Early History of Mankind* by Humphrey J. T. Johnson, in which are discussed the problems raised by the differences between the scientific or historical accounts of the origin of man and the accounts given in the Old Testament. The author has nowhere departed from the Augustinian criteria of interpretation, and he explores the enormously wider field of interpretation that has opened to us as a result of our knowledge of the habits and thought and language of the sacred writers, whose words are becoming ever more difficult to apply to the continually expanding and elaborated theories of physical science. His intention is to show that the well grounded conclusions of science do not in fact conflict with the account of the origin and early history of Man as set out in the book of Genesis, and he has done so, at least in outline.

But the problem of apparent conflict of the sacred writings and science must always be with us, because science is continually expanding and bringing us fresh facts to be incorporated in our view of the world. We must not therefore think of finally settling the problem, but be continually prepared to try to understand the new difficulties that science brings and must bring to us, and by understanding them to learn new truths about the nature of the World and the Word. It is clear that the Church in accordance with her earlier practice, no longer believes that all opinions, whatever their source, improve by keeping. There is good reason to hope that she, who has outlived many dozens of scientific fashions and has seen the attitude of man to Nature so radically changed, will continue to allow those who do the laudable work of reading the book of Nature to harmonise the truths they find there with the truths of the Divine word. For how much better it is to understand the totality of things both

through science and the deposit of faith than to extinguish either of these complementary illuminations which can be shed upon the world, our bodies, and our souls ?

So the Catholic, to-day as always, has no short cut to solving the problems of conflict. He has to treat every case on its own merits, by considering the value of the scientific evidence and the sense of the Divine revelation, and thus arriving with due humility at a provisional hypothesis that can form a plank in the rough model of Universal Being that each of us has to form during this imperfect life of sense. Nothing can assail our faith, for we know that the teachings of Scripture and tradition are true ; we reject no science, for we are convinced that God has given us the means of arriving at truth by observation and reason : all we renounce is the arrogance that claims to make absolute judgments, a renunciation made all the easier when we look at the fate of the pronouncements of the learned pundits of the past.

I have discussed so far the difficulties that confront a Catholic who wishes to reconcile his faith and his scientific views, but to-day the greater problem is of those who have scientific views and feel neither wish nor need for faith or revelation. It is true that the Church is now acting wisely enough with regard to laying no needless burdens on the faith of men of science ; yet she is in fact but shutting the stable door after the scientific horse has gone to graze in very different pastures.

Galileo was the first to begin to create a separate world in which science was autonomous. In his scientific explanations he admitted only motion and matter in its primary qualities, extension, form, hardness, etc., refusing to consider the secondary qualities that cannot be perceived apart from man's organs of sense, e.g., colour, savour, beauty, etc. Descartes went further and supposed a universe on totally mechanical principles, viewed by mechanically operated senses whose findings were accessible to the soul, locked up in the pineal gland of the brain.

Newton showed that in the heavens and on earth the same fundamental laws of motion applied, and so included the whole sensible universe in his mechanical philosophy. He believed in God ; but he created a system, in the essentials of which God had no part ; and the Newtonian view of the universe, as held by his XVIII-XIXth century successors, was a purely mechanical system of atoms and energy. Biological explanations followed the same mechanical lines. In fact, scientists of the XVIIIth and early XIXth centuries commonly believed in God ; but they had constructed a model of the totality of things in which He had no part.

In the second half of the XIXth century science had grown so important, universal and influential, that the scientist began to say, "This mechanical model of the universe represents all concerning

which we have knowledge," from which agnostic position it was a short step to the atheistic position of to-day, in which science is not opposed to religion, but considers the question of the existence of spiritual beings to be something outside science, and therefore as not being a matter for serious discussion by scientific men, in which class nearly everyone who interests himself in scientific discovery wishes to be included.

There has not been merely a change in the standards of interpretation of the Scriptures; there has been a new world-picture which has become implicit in the common talk and journalism of the day. The man in the street may not understand the foundations or the conclusions of science, but he has accepted its standard of evidence and its method. There has indeed been a change of front. Until the XIXth century, the feature of the conflict we have been discussing was religious intolerance of scientific views. The boot is now on the other foot. Science has become the repository of inviolable dogma—not as to fact but as to method. The religious are the heretics. The man of science has constructed a creed which is not the weaker because it is held implicitly.

I believe that the only trustworthy information is that gained by observation and experiment. All that is observable can be described in terms of matter and energy. What is not observable does not exist, and nothing else but matter and energy has been observed. Any explanation in terms of matter and energy is to be preferred to any other explanation. The soul and God are not to be mentioned.

The scientist who does not conform is subject to penalties. Censorship is applied. Thus a scientific paper that mentioned God would be rejected or returned by the Editor with the suggestion that the offending passage should be excised. A knowledge that a man allowed his religion to enter the domain of science would weigh heavily against him on any appointing board. It is not the religious who expels the man of science for his heterodoxy, but *vice versa*. There is no doubt that scientific men, as a body, are irreligious, and although there are individual exceptions, these probably amount to less than a twentieth of the whole. And alas! the scientific man is regarded by the general public as the Man who Knows: the repository of Truth.

Where is the blame for this state of affairs to be laid? I do not think Galileo, Descartes and Newton had any idea that they were the founders of a world-wide system of atheism—yet the essential mischief had been done before its popularisers, from Voltaire to Huxley, had got to work. Was the Church to blame, I wonder, for its failure to see what was coming, and to meet it? It is not easy to see what could have been done—except to do much sooner what has now been done, namely to give a generous welcome to scientific progress, to adopt a liberal view of the possibility of the re-inter-

pretation of the Scriptures, in such a manner as to relinquish nothing of the faith, yet give the fullest scope for teaching and research. May we not think that if the Church had, from the seventeenth century till to-day, encouraged, financed and promoted science, as she did philosophy in the middle ages, science might to-day be glorifying God instead of belittling man.

My terms of reference are historical : it is not for me to look to the present or the future. But I must say that the greatest of present-day religious tasks is the analysis of the cause of aversion between religion and science : and the construction of a scheme or discovery of a method whereby science may take its full part but no more in the affairs of man and of Humanity. As Art and Religion co-operated in the painters and builders of the middle ages, so science and religion must co-operate to-day in us. We barely know how they can be persuaded to co-exist in man's mind ; but the consummation of a marriage between them is a task on which every apt intelligence should now be bent.

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L'Olive

(translated from Joachim du Bellay)

If this our life, view'd from eternity,
 Counts not one day, the year that runs its course
 Puts all our days to flight without remorse,
 And all things born make end unhaltingly,

Why dreamest thou, O my endungeoned soul ?
 Why lovest thou the darkness of our day,
 Equipped with wings to bear thee on thy way
 Beyond it, to the bright and deathless goal ?

There, fast abides the good that all desire,
 The peace and rest to which all men aspire ;
 There reigneth love, there also true delight.
 There, soul of mine, to heights of heaven led,
 May'st thou both see and know, unblemished,
 The beauty that I worship day and night.

H. E. G. ROPE.

THE NEW PHYSICS AND THE PHILOSOPHY OF CATHOLICS

MY subject this afternoon is the relation of physics to philosophy, and in particular to the perennial philosophy, the philosophy of Aristotle and St. Thomas. As everyone knows, that philosophy was dominant in the Schools of the Middle Ages, but fell on evil days in the sixteenth and seventeenth centuries, when it came to be generally rejected both by metaphysicians and by men of science : and for the last two hundred years it has been ignored in the professional teaching of the Universities, in this country at any rate, and has been little heard of outside Catholic seminaries. Even eminent scholars have regarded it as a labyrinth of idle distinctions, worthless abstractions, loose definitions, doubtful assumptions, and unconvincing syllogisms, employing a barbarous terminology, and culminating in nothing but futile verbosity. But the last sixty years have seen a change, which may be dated from the publication in 1879 of the encyclical *Aeterni Patris* of Pope Leo XIII : the re-statement of the medieval doctrines by the late Cardinal Mercier and his fellow-workers at Louvain has found a sympathetic audience in wide circles outside the Catholic Church : and neo-Thomism, as the movement came to be called, is perhaps the most vigorous element in the world of philosophy to-day.

In the encyclical, the Pope referred to the intimate relations between scholasticism and physics : " the schoolmen taught," he said, " that only through the things of sense is the human mind raised to the knowledge of things ideal, and hence that nothing is more profitable for a philosopher than to inquire into the secrets of nature, and to make a profound study of physics." It is, in fact, characteristic of the outlook of Aristotle and St. Thomas that human knowledge is presented as an organic whole—logic, metaphysics, theology, ethics, physics, and cosmology, all appear in relation to each other as parts of a coherent and unified system. This characteristic, which places Thomism in a rank above all other philosophies as an intellectual structure, entails a liability to attack from many different sides : and it was indeed primarily in connexion with questions of physics and cosmology that the great catastrophe of the sixteenth and seventeenth centuries came about.

The account which scholasticism gave of the world of Nature had been taken over by St. Thomas from Aristotle, and represented the state of physical knowledge in the fourth century before Christ. It may, perhaps, be questioned whether the Stagirite, when he was

faced with the problem of choosing one among the rival systems of cosmology current at that time, made the wisest possible selection. He accepted the opinion that the universe is finite and spherical, with the earth fixed at its centre. Around this centre there is a system of rotating spheres, to which the heavenly bodies are attached and by which they are carried round with uniform motions. The stars and planets are everlasting and incorruptible, and must therefore be composed of a different kind of matter from the earth, which is the scene of continual generation and decay.

Aristotle's representation of the cosmos was not challenged throughout the Middle Ages, and indeed not until the publication of Copernicus's *De Revolutionibus Orbium Coelestium* in 1543, and hardly even then : for in the preface to this work, it was modestly declared that the proposal advocated in it, namely that of regarding the sun as the centre of the universe, was of the greatest convenience in performing mathematical calculations as to the apparent places of the celestial bodies, but should not be understood to assert anything regarding their actual physical disposition and motions in space. This disclaimer prevented any large-scale attack on Copernicanism by the upholders of the Aristotelian tradition for many years, and enabled the consequences of the new doctrine to be worked out in comparative peace. In the latter half of the sixteenth century, Tycho Brahe showed that a new star which appeared in the constellation Cassiopeia was undoubtedly situated among the fixed stars in space and was essentially one of them—a result which obviously was fatal to the doctrine that the celestial bodies are for ever unchanged : and in 1604 and some years following, Kepler arrived at his beautiful theorem that the paths of the planets relative to the sun are ellipses having the sun in one focus. After this it was no longer possible to regard the Copernican picture as a mere mathematical device : it must correspond to the actual physical structure of the solar system : and the first discoveries made with the telescope—the satellites of Jupiter, the mountains on the moon, and the spots on the sun,—completed the disproof of the traditional cosmology.

There was actually nothing in the new science that conflicted irreconcilably with the metaphysical teaching of the Schools : and the situation might have been saved at this stage, if the scholastic philosophers had followed the authentic precepts of Aristotle and St. Thomas, both of whom had in the strongest terms insisted¹ that experiment and observation are the sources of our knowledge of the external world : for if this principle is once admitted, it follows that physics and cosmology must be progressive sciences, and that appeals to traditional descriptions of the universe,—even though they should be descriptions favoured by Aristotle and St. Thomas—are worthless.

¹ Cf. Aristotle, *De Gen. et Corr.* I, 2 : St. Thomas, *Comm. on Aristotle's Physics*, Lib. viii, Cap. I, 1.

Unfortunately the peripatetic school had always ignored their master's teaching in this respect, and had treated the representation described in his writings as a final and complete account of the system of the world : and a similar clinging to authority was general among the later scholastics, who were unwilling to assimilate unfamiliar principles and who now, with obstinate conservatism, gathered their forces for an assault on the Copernican innovators. The trial of strength took place in the affair of Galileo, where the Aristotelians obtained a legal victory, but at a heavy cost : for from that day forward the men of science shook the dust of Scholasticism from their feet.

So far we have considered the peripatetic teaching about the external world only on its astronomical side : something must be said also about its more strictly physical doctrines. The most regrettable feature in Aristotle's treatment of physics was that he attempted to discuss phenomena of a very complex character without making any effort to analyse them into the simpler phenomena of which they were the resultant : this was a consequence of his rejection of the atomic theory of his predecessors Leucippus and Democritus, the revival of which after the overthrow of Aristotelianism made possible all the modern developments of chemistry and physics. To attempt to create a science of matter in bulk without regarding its atomic composition is, in fact, like attempting to create a science of psychology from observations of crowds without studying the individual human being.

At the same time, it must be said that much of the depreciation which Aristotle has suffered at the hands of the historians of philosophy, on the ground of his rejection of the atomic theory, is unjustified. For the atomic theory which he rejected was not the atomic theory of the modern chemist and physicist, in which the atoms exert on each other forces of gravitation, chemical affinity, and so forth, but the theory of the Greek atomists, in which atoms could affect each other only by impact. Aristotle's objection¹ to the old atomistic philosophers, that they limited themselves to the material and ignored the formal cause, was in essence his way of stating the difference between their conceptions and the modern theories. The alienation of the moderns from Aristotelianism is largely due to the fact that his arguments have not been adequately translated into the terminology of modern science.

Moreover, the vacuum in which the atoms of Democritus moved was a true non-entity, having no physical properties whatever² ; whereas the vacuum surrounding the modern atoms is the seat of electromagnetic and gravitational fields. This is precisely the point of Aristotle's argument that if space had no local properties,

¹ In the first book of the *Metaphysics*.

² Cf. Aristotle *Physics*. Lib. IV. Cap. 1.

the tendency of a body to fall to the earth would be unintelligible.

On the really fundamental principle of the atomic theory, namely, that a body is composed of ultimate parts which are physically indivisible, Aristotle and St. Thomas were perfectly sound atomists. "A natural body is not capable of infinite division¹" said the latter, referring to the first and third books of Aristotle's *Physics*, "wherefore it is possible to arrive at the smallest quantity of water and the smallest quantity of flesh: so that, if you divide it, it will be no longer water or flesh." This was a most remarkable anticipation, and one must regret that its authors and their successors did not carry it further.

During the last two centuries the scholastic philosophers have for the most part tacitly acknowledged their defeat in the field of physics and cosmology, and have withdrawn from it, confining their attention to ethics, psychology, and pure metaphysics, and leaving the external world to the experimental and mathematical physicists and astronomers. The effects of this policy on the reputation of scholasticism among men of learning have been disastrous. How, it was asked, can we credit what professes to be the science of all Being, when it has nothing of value to tell us about the kind of Being we can see and handle? Nothing, that is to say, but definitions that lead nowhere, that are impotent to make a prediction of even the simplest phenomenon, that give no hint of the deep penetration into the secrets of Nature which has been achieved by Newton and his successors. And these questions lead us to ask, what chance of success has the neo-Thomistic movement until the lost territory is reconquered? A philosophy that has no point of contact with modern science can never again have any significance for mankind.

Let us now return to the fortunes of scholasticism after the trial of Galileo. Under the influence of nominalist teachers, the perennial philosophy had by this time degenerated into mere lifeless subtleties and sophistries: but the widespread realisation that its account of the external world was false was perhaps the most powerful of the causes which led the next generation to reject it as a metaphysical system.²

The author of the metaphysical revolution, Descartes, was a sincere Catholic, and his motive was certainly not anti-religious: it was, as he himself tells us, an admiration for mathematics as the only department of knowledge that rested on a sure foundation, and a desire to establish philosophy in a position of equal security. He was disgusted by the perpetual appeals of the scholastics to the authority of their doctors: and he aimed at discovering axioms

¹ *Corpus enim naturale non est divisibile in infinitum: et ideo est invenire minimam aquam et minimam carnem, quae, si dividatur, non erit ulterius aqua et caro: St. Thomas's Comm. on the Sentences, Book II, Dist. XXX, Q. 2, Art 2.*

² A very sweeping condemnation. But it must be remembered that these Scholastics of the Renaissance period remained true to the solid metaphysical doctrines of the Schools. [ED.]

or postulates, such as those from which Euclid had deduced the science of geometry, on which a rational and uncontestible metaphysics might be based. The attempt was worth making; but the experience of the last three centuries has shown that there is no hope of its success. What is fundamentally wrong with the notion is that it turns its back on reason in the wider sense of the word—the *vôus* of Aristotle, the *intellectus* of the scholastics,—and looks instead to the kind of ratiocination that is used in mathematical demonstrations, the process of inferring syllogistically the consequences of clearly-defined concepts: and this is inadequate for the investigation of Being. In place of the scholastics' unquestioning belief that the natural faculties of man are competent to lead him to objective truth, Descartes introduced at the outset of his investigation a principle of universal doubt; and, in his new construction of metaphysics, was unable to link together in any satisfactory way the two independent entities whose existence he admitted, matter and mind. This dualism of mental and material substance, which was the chief characteristic of his philosophy, entailed a very unsatisfying account of man's relation to Nature: humanity was in effect deprived of any real participation in the physical world, and became an external spectator of its aimless performance: in the new doctrines, there was no solidarity of knowledge, such as had been characteristic of the perennial philosophy.

The Scholastic, grounded in the experience of material things, conceived the world as a genetic unity of which man was an organic part, an objective order of Being in which the physical and the spiritual were inseparable except in thought, and which existed for an intelligible end, determined by the highest reality, God. All knowledge was co-ordinated and harmonised in a theological conception of Nature. Cartesianism on the other hand offered only two incongruous and unrelated conceptions, incapable of union, whose co-existence was unexplained and incredible. It is not surprising that in the subsequent development, attempts were made to do without one or other of them as an independent principle. The notion of matter was analysed into perceptions of mind by Berkeley, who thus arrived at subjective idealism, a doctrine to which one or two modern physicists seem to be attracted. The materialists, on the other hand, attempted to eliminate mind as a separate entity, by explaining self-consciousness as something secondary and derivative, a by-product in a closed mechanical system of matter and energy. From Cartesianism were evolved these and all the other false monisms that have appeared in the last three hundred years, and have engendered the popular notion of a philosopher as a person who is at war with the commonsense of mankind.

While the revolution which was initiated by Descartes was disastrous for metaphysics, and must be regarded as a calamity in the develop-

ment of speculative thought, its effects on physics and cosmology on the other hand were, for some time at least, beneficial : for being now completely disjoined from general philosophy, they entered on a phase of rapid independent development in the hands of experimenters and mathematicians who knew and cared nothing about metaphysics. Only in quite recent years has it been generally realised that the dissociation of science from all ideas of the value and purpose of life was harmful : and a new situation has thereby been created, in which Catholics, as the guardians of the perennial philosophy, may play a decisive part.

Evidently the crux of the problem that lies before us to-day is to establish a proper and harmonious relation between neo-Thomism and the new physics. The scholastics and the men of science, having lived apart for so long, speak different languages, and the first thing to do is to make a dictionary for translating one into the other. Let us take for example a crystal of rock-salt and consider what would be said about it in the two terminologies.

First, let us hear the physicist. He would describe its constitution by asking us to imagine a solid mass of bricks, each cubical in shape, and to suppose that an atom of sodium is at every one of the corners of the bricks and also in the centre of every one of their faces : so that the atoms of sodium are arranged in what is called a "face-centred cubic space-lattice." Next, place an atom of chlorine at the centre of every brick and at the middle point of each of the edges. It is easily seen that the atoms of chlorine form another face-centred cubic lattice, which may be obtained from the sodium lattice by a displacement in space. The atoms of sodium and chlorine occur alternately, so that each sodium atom has as its nearest neighbours six chlorine atoms,—one east, one west, one north, one south, one up, and one down : while each chlorine atom similarly has as its nearest neighbours six sodium atoms. Such is the physicist's account. He knows of innumerable samples of rock salt, differing in their situation, orientation, temperature, pressure, electric potential, and every other circumstance, and he has abstracted from them the character which is common to them all and by virtue of which they have the nature of rock-salt. This character is an object of thought, an idea in the mind : and it is what the scholastic calls the *substantial form* of rock-salt. All the physical and chemical properties of rock-salt are necessitated by its substantial form. The substantial form of rock-salt differs from the substantial forms of its constituents sodium and chlorine : the substantial form of sodium may be described by the statement that its atom is constituted of a nucleus containing 11 protons and about 12 neutrons, surrounded by 11 electrons : and the substantial form of chlorine may be described by the statement that its atomic nucleus has 17 protons and about 18 neutrons, and is surrounded by 17 electrons. All the physical

and chemical properties of sodium and chlorine respectively are consequences of those substantial forms. Science consists essentially in the study of substantial forms.

Substantial forms are abstractions, intelligible and definable: they represent the common essence of *classes* of objects, and are not to be confused with the *individual* sensible objects of which the external world is composed. Each of these individual objects is actuated by a substantial form: and the rest, so to speak, of the individual object when we make abstraction of the substantial form, is called the *matter*. This use of the term "matter" is peculiar to the Aristotelian-Scholastic philosophy, and must not be confused with the ordinary use of the word "matter" in modern speech. Form and matter in scholastic philosophy are separable only in thought, and one would be not very far out in saying (when we are dealing with inanimate objects) that they stand for the scientific and non-scientific aspects of a thing: form is the intelligible structure, as the man of science grasps it, whereas matter is the principle of individuation.

Let us look at the question from another angle by tracing the powers of acquisition of scientific knowledge. The primitive objects of cognition are individual and are indicated to us by the senses. The human intellect works on the sensations received, and abstracts from the individuality, or as the scholastics called it, the *haecceity* (the *thisness*) of things, in order to attain to a more general type of knowledge. By further abstraction it arrives at something immaterial and purely intellectual, namely, a structure, or substantial form.

Although we have as yet taken only a first step in scholastic doctrine, it has taken us far enough to see what is wrong with the philosophy of Sir Arthur Eddington. Let us state his principles in his own words: "All that physical science reveals to us in the external world is group-structure, and group-structure is also to be found in consciousness": "Since the external world is introduced as a receptacle of structure, our knowledge of it is limited to structural knowledge": "The recognition that physical knowledge is structural knowledge abolishes all dualism of consciousness and matter": "We reach, then, the position of idealist, as opposed to materialist, philosophy. The purely objective world is the spiritual world: and the material world is subjective in the sense of selective subjectivism. . . ."¹

This, if I understand Sir Arthur aright, amounts to saying that when we observe a crystal of rock-salt, the only thing that exists in it is its intelligible structure, or, in scholastic language, its substantial form, and that the metaphysician can write off the *haecceity* of this particular crystal as non-existent. In other words, there exist only substantial forms, and nothing corresponding to the scholastic notion of "matter." It is a curious instance of how a man of science may

¹ Eddington, *The Philosophy of Physical Science* (1939) pp. 69, 150, 209.

become so wrapped up in his subject that he can see nothing outside it. Science is not interested in the haecceity of the innumerable objects in which a substantial form or structure is realised, and Eddington thinks that the individuation may be ignored. His error is at the opposite extreme from that of the nominalists of the later Middle Ages, for they taught that only particular objects are real, and universals or general ideas, the qualities common to all the objects of a class, were mere creations of the mind, having no existence except as names or words: whereas Eddington not only holds that structures (which are universals) are real, but goes further and regards the "thisness" of individual things as beneath notice. He obtains in this way a monism, a simplification of the world, by leaving out something that is obviously there.

Having now established some degree of contact as regards ideas and language between scholasticism and modern science, let us take up a question of principle on which the neo-Thomist must be prepared to give a definite answer, namely that of the relations between physics and philosophy: is one of them antecedent to, or dependent on, the other?

All our ideas are derived originally from objects which are perceptible to the senses: and the function of philosophy is to co-ordinate and complete the knowledge obtained by the special sciences, with the aim of discovering the essential nature of things and the universal principles of Being. All metaphysical reality is therefore derived primarily from physical realities, and exhibits their essence: so that as a physical theory becomes more perfect by penetrating more deeply into the secrets of nature, it becomes more competent to furnish indications of metaphysical truth. Such seems to have been the teaching of Aristotle and St. Thomas. For the word *metaphysics* itself is derived from the circumstance that the writings of Aristotle on the subject bear the name *μετὰ τὰ φυσικά*, that is, *after physics*: and St. Thomas says¹ "Metaphysics, i.e., beyond physics, because it presents itself as an object of study after physics to us, who arrive at the knowledge of things immaterial by means of things sensible." It may fairly be argued from the statement that St. Thomas required his disciples to learn physics—the best and most up-to-date physics accessible to their generation—before entering on the study of metaphysics: and, since physics is a progressive subject, the inference is that metaphysics should progress with it. The tragedy of scholastic philosophy is that St. Thomas's intention has never been carried out. He himself had at his disposal nothing but the physics of Aristotle, which was based not on experiment but on guesses and *a priori* principles, and was in fact completely erroneous: and this is the explanation of the very considerable extent to which

¹ "*Metaphysica, i.e., transphysica. quia post physicam discenda occurrit nobis, quibus ex sensibilibus competit in insensibilia devenire.*" St. Thomas, *Opusc. in Boet. de Trinit.* Q. 5., Art. 1.

apriorism enters into his philosophy generally. To take a simple example, in the first of the five proofs of the existence of God, he begins by asserting that "Whatever is in motion must be put in motion by another." This assertion appears here in the guise of a metaphysical proposition: but it is an echo of the *a priori* Aristotelian physics, and we may venture to think that it would never have been used by St. Thomas in this form, if he had been acquainted with the properties of radium.

It would be possible to compile a long list of erroneous *a priori* principles which were adopted into scholasticism from Aristotle: such as the doctrine that every substance has a place proper to it, which it strives to reach, this being the reason why fire moves upwards and terrestrial matter downwards: or the doctrine of the eternal incorruptibility of the heavenly bodies, with its corollary that they are constituted of a matter different from that of the earth. The later scholastics came to regard apriorism as an essential characteristic of metaphysics, and to believe that the conclusions of metaphysics were on that account of a higher degree of certainty than the conclusions derived by physicists from experiments; whence they conceived of metaphysics as the supreme natural science, having a regulating power over the special disciplines, whose conclusions were to be rejected unless they conformed to its principles. The judges of Galileo affirmed in 1633 that "to say, that the sun is at the centre of the world and immovable, is a proposition absurd and false in philosophy . . . and to say, that the earth is not the centre of the world and immovable, but that it moves, even with a diurnal motion, is also a proposition absurd and false in philosophy."

While it will never again be possible for metaphysics to claim a censorship over physical theories, the relation of the two is still a matter for considerable differences of opinion. The reason is, that no agreement has yet been reached on the question as to whether certain metaphysical principles are *a priori* or are derived from experience. Pre-eminent among these is the *Postulate of Causality*, which is of such cardinal importance not only in scholasticism but in the modern philosophies, that it calls for a careful examination.

The notion of a *cause* is primitive and universal, and can hardly be defined in terms of anything simpler than itself. But it remained a vague and unscientific notion until Aristotle took the matter in hand and gave his celebrated analysis of causality,—his word for cause, *αἰτία*, being somewhat wider than the English word and signifying everything that contributes to the production of an effect. He observed that for the constitution of a new material, four things are requisite, namely, something out of which it is made,—this is the *Material Cause*: something to give it its specific nature—this is the *Formal Cause*: somebody or something to induce the formal cause in the material—this is the *Efficient Cause*: and a teleological

principle or motive, on account of which the efficient cause acts : this is the *Final Cause*. Thus in the production of a statue, the material cause would be the original block of marble, the formal cause would be the figure chiselled out, the efficient cause would be the sculptor, and the final cause would be the idea or likeness intended. The Aristotelian doctrine of causality consists in a determination of the relations which these types of cause bear to each other, in the light of the physical knowledge of his time.

Unfortunately, in the great break-away from Aristotelianism in the seventeenth century, the four causes were discarded with everything else. Descartes' claim "Give me matter and motion, and I will construct the universe" amounted to a rejection of the notion that there must be a formal cause : and none of the modern philosophies has attempted to do what might have been well worth doing, namely to develop the peripatetic doctrine in the light of the deeper and richer knowledge of Nature which was now available. If Aristotle or St. Thomas had been alive, they would undoubtedly have risen to the occasion and seized the great opportunity : but their successors did nothing and allowed their treatment of the subject to become more or less petrified in the form which it had assumed in the Middle Ages : probably many of them took the view that causality was a doctrine of metaphysics and that metaphysics was based on *a priori* assumptions and had nothing to learn from contact with the external world. Meanwhile the physicists, ignoring Aristotelianism altogether, and without any conscious intention of philosophising, began to construct for themselves what amounts to a new metaphysic of causality : to this our attention must now be turned.

To begin with, they dropped the material, formal, and final causes (of which indeed most of them had never heard) and took the word *cause* to mean what Aristotle had called the "efficient cause." This could be typically represented by a dynamical force acting on a particle at a point. But with Newton's discovery of the law of gravitation the outlook became somewhat modified : for the most striking feature of Newtonian gravitation is that it is a reciprocal action—the two particles affect each other, and in exactly the same way. Thus the notion of force tended to become replaced by the notions of *interaction* and of the *energy* possessed by the aggregate of a set of particles : and instead of considering single bodies under the influence of forces, the mathematical physicists developed theories such as those of Lagrange in dynamics, in which mathematical equations are obtained capable of predicting the future of a whole system of bodies simultaneously, without bringing in the ideas of "force" or "cause" at all. The movement in this direction culminated in the year 1915 when the German mathematician David Hilbert of Göttingen—whose death at a great age has been reported recently—showed that all physical happenings—gravitational, elec-

trical, etc.—in the universe can be predicted from a knowledge of a single “world-function” as he called it, without any necessity to mention explicitly such things as forces or interactions between the bodies of which the universe is composed. Evidently the notion of a causal nexus, as affecting the relations between objects, has now completely disappeared, and has been replaced by the notion of a single entity governing the whole of existence. This is in effect the old doctrine of Malebranche, generally called *occasionalism* by philosophers, which asserted that created things have no proper activity of their own, but are merely *occasions* in respect of which the divine activity is manifested: the only modification being that in the metaphysical theory which the physicists have devised for themselves, God is no longer mentioned: He is replaced by a cosmic mathematical function.

While the word *cause* was in process of banishment from physics, the Postulate of Causality was also undergoing a revolutionary transformation. A scholastic might perhaps have formulated it thus: *Inceptive or contingent Being necessarily supposes its efficient cause*: that is to say, “everything that is brought into existence necessarily supposes somebody or something to bring it into existence.” Kant, in the second edition of the *Critique of Pure Reason*, adopts the form: *All changes take place according to the law of the connexion of cause and effect*.

Modern philosophers have disputed as to whether the Postulate of Causality is an epistemological axiom, and in fact a necessary presupposition of all scientific knowledge (this was the view of Kant), or whether it is induction from experience, being the fruit of our observation of habitual uniformities (this was the view of Hume). The physicists, taking no part in this discussion, fastened on the notion of *predictability* as being the essentially valuable content of the notion of causality, so far as their science was concerned: and accordingly they completed the postulate by embodying in it two fresh assumptions, namely, first, that when an effect is physical, its cause is an antecedent phenomenon of a purely physical character, and secondly, that the relation between measurable quantities in the two phenomena can be represented by mathematical formulae. The postulate could now be stated in the form: *The physical universe is a closed system, the succession of whose changes in time is, in principle at any rate, completely predictable*: in other words, the material world is absolutely deterministic. This statement is much more precise than any of the forms in which the postulate of causality has been expressed by philosophers.

At this point a caveat may be entered. Are there not many physical phenomena, for instance the tossing of coins or the casting of dice, in which the issue is not predictable? In other words, has the notion of *chance* no place in physics?

Until within the last few years, the answer to this question would have been straightforward. It would have been pointed out, that

when we speak of physical events as being in all cases predictable, we mean that they are predictable *in principle*, that is, that they could be predicted by anyone who had an adequate acquaintance with the situation, an adequate knowledge of physical theory, and an adequate ability to perform mathematical calculations. In the case of tossing coins or throwing dice, we have not these qualifications for making the prediction: we have no accurate information as to the motion imparted to the coin by the act of tossing or to the die by the act of casting: we have as a rule no data regarding the resistance of the air or the moments of inertia of the coin or die, or the distance from the point of projection to the surface on which they will fall: and even if all this knowledge was in our possession, we could not carry out the laborious calculations required to determine the final issue, in the very short interval of time occupied by the passage of the coin or die through the air. But we believe that a being not hampered by any of these limitations would actually be able to make the prediction: for him, the event would be not one of chance, but of strict determinism.

Chance, then, is (or was until recently believed to be) merely a word used to imply that in certain cases we are too ignorant to be able to do something which could be done by a being less ignorant than we are: the existence of chance, on this view, would not affect the statement that all events in the physical universe are governed by strict determinism.

It must now be explained how within the last dozen years, a careful analysis, by the aid of the new science of quantum-mechanics, of certain phenomena in atomic physics, has shown conclusively that the postulate of causality is not universally valid.¹

It is well known that radioactive substances, of which radium is the type, emit radiations of various kinds continually and spontaneously. These radiations proceed from the nuclei of the atoms of the substance, which, in the act of sending out radiation, break up and become nuclei of other elements: thus when an atom of radium emits an alpha-particle, the atom becomes an atom of radium emanation. All the atoms in a lump of a radio-active substance do not break up at the same instant, and thus a perpetual succession of emissions is kept up until every atom of the substance has been transformed—a process which may take thousands of years. If a small quantity of a radium salt is placed near a fluorescent screen, the alpha-particles shot out by the radium bombard the screen, producing scintillations which may be observed. These scintillations appear at irregular intervals, and the instants when they will be seen cannot

¹ Strictly speaking, what has been shown is that certain physical phenomena are *in principle unpredictable*; whether this constitutes a violation of the principle of causality or not, depends on how the principle of causality is defined. (AUTHOR).

Scholastic philosophers would certainly dispute with the author the validity of some of his conclusions. [ED.]

be predicted, since we have no means of telling when any particular radium atom will explode. The phenomenon thus belongs to the category of "chance," and we have to inquire what is the nature of "chance" in this case: has it the same meaning as in the tossing of coins and casting of dice—that is to say, is our inability to predict the instant of the next scintillation due merely to the limitation of our powers of observation and calculation, so that a being better equipped than we are would be able to make the prediction—or on the other hand, is there a real and inescapable uncertainty, so that an imaginary physicist, endowed with faculties of human type but immensely more powerful and acute, could do no better than we can?

This problem has been solved only as the result of a profound discussion of the mathematical theory of radio-activity: an elementary account is given in my recent Guthrie lecture to the Physical Society of London, and the complete analysis is to be found in Professor von Neumann's book, *Mathematische Grundlagen der Quanten-Mechanik*: the answer is quite definite, and is in favour of the second of the alternatives: that is, the time of the break-up of a radium atom is unpredictable not merely in practice, but in principle: there is a genuine indetermination, a failure of the Postulate of Causality. The view of Kant, that the Postulate is a necessity of thought, independent of all experience, is thus definitely disproved: and a striking illustration is thereby provided, of the dependence of metaphysical axioms on observational facts. Even if it is granted that the fundamental conceptions of science—cause, order, relation, identity, class—are metaphysical, they do not constitute knowledge until their content has been filled in from experience.

The general attitude of physicists during the last two hundred years has been, that there is no need for them to know anything about metaphysics, whether it is a superstructure built on physics or not, since physical theories can be devised, understood, and believed, by anyone, whatever his philosophy. But in recent years this isolationist attitude has weakened, partly from a desire to see science playing a greater part in life and thought, partly with a view of systematising and perfecting the rough home-made metaphysics which is implicit in modern scientific writings, partly from a recognition that every branch of science depends on presuppositions which cannot be established by the methods of the science itself, and also that science deals with universals, which are proper objects of metaphysical study; and perhaps most of all, at any rate in recent years, from a hope that philosophy may help to clarify the mystery that wave-particles are the ultimate constituents of the universe.

Of existing philosophical systems, materialism does not as a rule make much appeal to physicists: for they see, perhaps more clearly than other people, the impossibility of explaining spiritual values in terms of protons and electrons. Then the fact, always present to the

mind of the physicist, that events in the material universe admit of prediction according to mathematical laws, is significant, for mathematical law is a mental concept, and it may therefore be inferred that there is a mind, analogous to our minds, revealed in the universe. In a world that is not the expression of mind, there could be no science, for a mindless world is necessarily unintelligible. Moreover, the fact that the *same* mathematical laws are valid over the cosmos—that it is connected, interrelated, and consistent—leads to the inference that there is only a *single* mind involved in the whole creation : and this indicates one of the physicist's approaches to the conception of God. Again, modern cosmology, which shows that the universe cannot have existed for an infinite time in the past under the operation of our present laws of nature—in other words, that there must have been a Creation—reveals the insufficiency of purely physical theory as an explanation of all Being.

It may further be said, that men of science are not naturally inclined to the doctrine at the opposite extremity of the philosophical scale, namely subjective idealism : they are confident that reality exists independently of human cognition, and cannot bring themselves to disbelieve in the objectivity of the material world : and they have an instinctive sympathy with St. Thomas's rejection of the idealistic aspects of Neoplatonism, his conception of man as a part of Nature, his assertion of the meaning and value of the concrete things of sense, his reliance on experience, and his belief in the fundamental rationality of the universe. There is a natural affinity between science and the perennial philosophy : indeed, the line of descent of the modern physicist is to be traced not from the humanists of the renaissance, but from the schoolmen of the twelfth and thirteenth centuries, who translated into Latin the Arabic versions of Greek mathematics and science.

While the scholastic metaphysics undoubtedly originated in a very naive outlook on the external world, it is not incapable of assimilating the refinements of modern theoretical physics. One of the most fundamental of Aristotle's principles, was that there are two ways of Being, *potency* (δύναμις) and *act* (ἐνέργεια). Now the physicist to-day is interested chiefly in being able to predict what a thing can or will do later on : many of his most important concepts, such as potential energy and entropy, relate to what a body is capable of achieving, rather than to its present appearance or activity : thus, the entropy of a body determines how much mechanical work the body can develop from a given fall of temperature : and even the change from the Newtonian to the Einsteinian theory of gravitation, which from the point of view of physical conceptions was a complete revolution, only brought out more clearly the Aristotelian idea that gravity consists in a certain *potency* with regard to space.

There is one notable respect in which the attitude of the schoolmen

to the external world differed from that which has been general since the renaissance, namely that the scholastic conceptions were essentially teleological—they tried to understand the purpose behind events, whereas the later outlook has been directed towards discovering laws rather than ends, *how* rather than *why*, and has renounced any claim to understand the deeper significance of its own discoveries. Reverting to Aristotle's doctrine of the four kinds of cause, we may say that in modern theoretical physics, the formal and efficient causes of physical events have been absorbed, and in a certain sense blended, in the mathematical theory, while the existence of a final cause has been simply ignored. But the spontaneous development of the subject has tended to change this state of things and to re-introduce the Aristotelian habit of mind: for example, in the method of describing the course of events by means of Hilbert's world-function, to which I have already referred, the actual condition to be satisfied is that the integral of the world-function is to be a minimum: that is to say, the development of the physical world has to take place in such a way that a certain quantity has a smaller value than it would have if the development took place in any other way and this conception is essentially teleological.

Thus, while Aristotelian metaphysics was a frame made originally to fit the picture of Aristotelian physics, a picture which has now been cut out and thrown away, yet there are grounds for confidence that the new picture can be fitted into the old frame: and we may entertain the hope that the recovery of the lost territory of physical science will presage the reconquest of the intellectual world for the philosophy of St. Thomas, and the restoration of the unity of European thought.

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SCIENCE AND THE LAY APOSTOLATE

YESTERDAY we were concerned with the objective side of the subject of the Conference, and we heard two eminent scientists bring to their task the fearless investigation of historical and scientific fact which becomes the scientist worthy of the name. Yet objective though their lectures were, the very nature of the subject pointed the way to a more personal treatment of the relations of science and religion as activities realisable without contradiction and possibly with some relation of advantage within the life of the individual. And so it has fallen to me this Sunday morning to examine the scientific mind in that activity of religion which consists in proclaiming the truths which govern our Christian approach to God. I am enabled to do so with the less hesitation in that the theology which I profess vindicates to itself the name of science. When therefore I use the word without qualification I shall take it as connoting all good reasoning based on assured principles and meticulous observation. I hope by these means to make my remarks helpful to a wider circle than those engaged professionally on the investigation of natural phenomena, though I shall of course have those largely in mind.

One further prefatory note is that the kind of apostolate which I envisage is one which, while lay in the sense of not specifically clerical, is one which forms a part of almost any sincere Catholic's life, be he lay or cleric : that apostolate I mean which is exercised in or as the result of our ordinary social contacts, and which may extend to more or less systematic discussion and instruction in Christian doctrine.

There have been a number of articles and discussions on this subject in recent years. You may remember especially those of one whom I would like to mention at this Conference, Mr. E. F. Caldin of The Queen's College, Oxford, whose work with a study group of Catholic scientists at Oxford, and as Acting Secretary of L.O.C.K. will be known to many of you. I fancy that the urge to investigate the subject arises out of the fact that science and the lay apostolate have, or appear to have, only a very tenuous connection, and the scientist who is a practising Christian, in a praiseworthy desire to avoid leading too departmental a life, taxes his ingenuity to the utmost in finding out how his worldly profession can be made to contribute to the spreading of the faith. The subject was none of my choosing, but as it was asked for by some of the organisers of the Conference, I must suppose that the question is still felt to be in need of an answer.

In so far as there is any difficulty about an answer, this surely

lies in the fact that the question is generally envisaged as a problem. For St. Thomas Aquinas and St. Albert the Great the universe presented many a question, but one does not get the impression that any of the multitudinous questions which they asked and did their best to answer, were for them what we should call "personal problems." If we were to search the index to St. Thomas's *Summa Theologica* for a topic which would be the most likely to be a problem for him, I think we might pick on the articles concerned with the worth of the mixed life of contemplation and action as compared with the life of pure contemplation or that of pure activity. He was a member of an Order only recently founded, with as yet very little tradition behind it, which had been set by its founder a most remarkable task. St. Dominic had adopted for his institute the domestic framework and practices of monasticism, designed for the spiritual well-being of the monks who dwelt in the monastery, and yet he had also said in effect: Go, and take what God gives you here to the world. *Contemplata aliis tradere* was to be the aim of the friars; putting others in possession of what they discerned. It is the perfect description of the mixed life, which is concerned, not with the generality of good works vitalised by prayer and the spirit of charity which prayer fosters, but specifically with preaching and teaching and their necessary concomitants of prayer and study. And yet although this distinct kind of life can thus be defined, it is not hard to see that it may very easily lose its self-consistency and degenerate, if I may so put it, into one only of its component elements, thereby becoming some other kind of life and failing in its aim. By his profession therefore St. Thomas was set to walk upon a razor edge and in a matter of such delicate precision there must be every temptation to justify intellectually any deviation from the exact balance which may suit the individual.

But St. Thomas was both a Saint and a scientist, a great Saint and a great scientist, a man who would not admit intellectual distraction from what was right and what was true. And this is the characteristic of his viewpoint and method which I want to bring to your notice; that whatever question he is investigating, it both has a character of its own and one derived from its place in a much larger system to which it belongs. Among his many talents St. Thomas had a talent for understanding the nature of the part both in itself and as a part. He would not misunderstand a fact to force it into a theory, but he felt he had not fully understood a fact if it was not further seen in terms of his theory, and by theory I do not mean an unverified hypothesis but something much nearer its etymological meaning, viz., a contemplation of the whole. There is a fashion among certain eclectic philosophers of quoting sundry opinions from this author and that in support of their views as though to back them up with one or another great name in the history of thought. These opinions if true are regarded as flashes of

understanding rather than as constitutive elements of any one system. The isolated selection thus made is a backhanded kind of compliment. For it goes with the rejection of many concomitant opinions and implies that the authors in question, however gifted, were at least not gifted with the power of scientific universalisation. Let us take this example of the value of the mixed life, so obviously relevant to our purpose. As an entity in itself it needs definition. Like all forms of human activity, it is distinguished by its object or immediate purpose: by the material with which it is concerned. This is the spread of truth by preaching and teaching. Like all forms of human activity, it is given a further value by the purpose for which it is lived: this is the acquisition of a perfect charity by the individual, union of affection with God, and the efficacious willing of divine goods to God's creatures. St. Thomas therefore sees the perfection of the mixed life to consist in the fact that it is directed to the welfare of others as well as of oneself—and in this it is pre-eminent over the life of pure contemplation: further, it is concerned essentially with their spiritual welfare—and in this it is pre-eminent over other forms of religious activity. All forms of the religious life are directed to the perfection of charity.

Do you see how the question is answered in terms of the general and the particular? There is an exact demarcation of the subject under discussion and the subject once isolated is seen in terms of a whole complex of doctrine about the scope of charity and the nature and worth of human acts. Of course the practical details of when and where to preach and teach and pray are matters of prudence not science. But those do not constitute problems. They are matters for counsel taken and judgment made, on the available evidence, in due time, not too much, not too little. And if practical difficulties remain, there is the virtue of fortitude to deal with those—not too bold, not too timorous. But the stage is set for prudent and courageous living by the detached, masterly, speculative view of the systematic scientist, who does not desperately tug disparate elements into precarious conjunction, and does not universalise ahead of his evidence but sees the details as details of a whole, while contributing to his view of the whole. I think that is a standpoint which should appeal to the experimental scientist of what is called the classical type, as well as to the mathematical physicist. The genuine scientist is never content with isolated descriptions. He is always seeking a simpler and more unified view of the whole physical order. The history of science shows a progress from fact to theory and then to more fact which doesn't altogether agree, in spite of the efforts of the investigator, with the theory. Gradually the pressure of fact causes a transformation of the theory, the aim always being to preserve unity and harmony of sense and intellect.

But with all the sameness there is this difference between the position of St. Thomas or of any theologian and that in which the physical scientist finds himself. St. Thomas is in possession of a theory, a contemplation, whose object is given and guaranteed from outside the created order, and he is concerned to interpret the world in theological and metaphysical terms. But if you are dealing with sensible being as such, not with sensible being as related to God (theologically) or as *being* (metaphysically), your facts and your theory belong to the same order and have a greater reciprocal influence on one another. And this I think is why our question is apt to look like a problem. Science has its place within the contemplated theological or metaphysical system but the scientific content does not alter the theological or metaphysical structure. The face the world presents to us as physical scientists does not touch the creation of the world by God and for God. That origin and purpose cannot be disproved by physical investigation. Whether it can in any sense be proved is of some but not of vital importance. The properties of space are irrelevant to the origin and destiny of the rational creature.

This is the place to introduce one conception of the answer which is an extension of the principle that we heard strongly emphasized by Professor Whittaker yesterday afternoon, that all truth comes from God. Truths therefore cannot be contradictory, and every truth bears some imprint of the First Truth. Yet it is clear that just as the physicists disclaim their ability, and even proclaim the impossibility of finding natural causes for all natural effects, so it is impossible to find a logical connection between some truths, such for instance as the truths of Christian Doctrine and those of natural science. But the way is open to find a factual connection, which is of as much help to living as any logical one could be: I mean the factual connection produced by the Incarnation of our Lord Jesus Christ. The medievals had a much greater sense of this than we have. You may remember St. Thomas's question about the fitness of the place appointed for the Incarnation, and the common idea of Jerusalem as the navel of the world. It is an interesting question for the historian and the psychologist how far this point of view was encouraged by erroneous ideas of the structure of the cosmos, or how far the current views of natural science provided a convenient opportunity for the embodiment in mythical form of a deep and correct sense of the sacredness of certain places inherited from the Jewish tradition and finally justified and guaranteed by the coming of the Word made Flesh. This sense has of course been preserved in theological tradition though our account of it nowadays would probably emphasize the historical rather than the geographical aspect. Well, there are Christian scientists who, more or less tormented by the profane character of their work, seek consolation

in the thought of the sanctification of the material world accomplished through the Hypostatic Union, the earthly life of Our Lord, and His institution of the Sacraments. As a contribution of scientists to the general religious attitude, that standpoint is offset by the widespread popular conception that Einstein has proved all space relations illusory and that space has no transcendental significance whatever. All the same, this appreciation of the factual connection of the world we live in with the divine Person who came to guide us through it and out of it, is perfectly justified and can be extremely helpful to its possessor, both in his private life and as a weapon in his apostolic armoury. A conviction such as that will make itself felt and be a cause of enquiry. However the answer is not complete if left at that point. The scientist who has got so far has put his feet on the Way; he has yet to find out how to walk along it. Therefore I want to proceed to a further answer in terms of moral rather than dogmatic theology.

We must, then, turn from the comparison of the two sides of our subject on the speculative plane, to a treatment more directly concerned with them as modes of human activity. This time let us take the differences first. They are even more strongly marked. Science is impersonal and even where it is concerned with practical matters, purely truth regarding. If you want to build a bridge in a certain position of given material, the scientist will give you the equations satisfying the data provided. The embodiment of those equations in the material is a matter not of science but of craft. How stands the apostolate? The function of an apostle is to win people to faith, a phrase which involves a number of elements. Since faith is a virtue of the intellect, the truth must be propounded to the intellect. *Fides ex auditu*—Faith comes by hearing. But in faith the intellect does not assent to the evidence of truth; it assents because moved to do so by the will. So the apostle must also propound a good desirable to the will. What good? That is the crux for the apostle. What good can be presented that will motivate the assent of the intellect to the inevident truth? Here apostles can make a big mistake. There are all sorts of ways of winning people to assent to truths which they do not understand. All kinds of allurements can be produced to titillate all kinds of appetites, all sorts of pressure can be brought to bear. But in this case we may ask if the desired result can be obtained by dressing up revelation in borrowed garments? Is any goodness less than the divine goodness of the truth itself, a sufficient motive for a genuine conversion? Apostleship is assuredly an art, but the function of art is not merely to make something: it is to make it well, to make a good work—in this case a genuine Christian. Remember then that genuine Christians are in the first place made only by the grace of God. If we keep that in the forefront of our minds, any disputes about

apostolic methods fall into their place as very secondary. Turning however to the secondary, we may state two principles, first that any good act done under the influence of charity is supernaturalised ; secondly that it requires a high degree of charity for this virtue to be disclosed through the medium of actions which are not obviously supernatural. Thus the exercise of social and intellectual accomplishments is of supernatural worth if performed under the virtuality of charity : but to the observer they may very well appear as nothing more than social and intellectual activities and may even be open to misunderstanding. Accordingly, the more the apostle relies on such things for getting an audience or keeping one, the more liable he will be to distract that audience from his essential message, and to attract them to something quite different from what he intended. Please notice that I am not advising you against the fullest use of every gift you have, in the apostolate : I am simply noting some fundamental truths which ought to condition every such use of your gifts ; truths, the neglect of which leads to a spirit of presumption and consequently the putting of far too great a strain on one's own powers. When they break down the result is likely to be despair.

The aim must always be to disclose rather than to disguise the truth, and for this scientists are peculiarly well qualified to work, especially among people of like training. They have been accustomed to banish all pre-occupation that may interfere with their occupation—the discovery and acknowledgment of the truth. This habituation calls for a considerable degree of asceticism in the devotee of science. The properties of space may be irrelevant to personal destiny, yet that *my* theory should be upset, that I should not enjoy myself the distinction which should rightly be shared by others, that I should publish the advance which looks like giving others scope for much more startling advances, demands from many temperaments and characters a great effort of moral honesty. It is just that quality of completely selfless, perfectly objective bowing to the truth which the apostle needs. For that is precisely what he is asking of his hearers, and he can hardly hope to convince them for long if his religion appears as the projection of some purely private hopes, a veil for selfish desires. There is much in the apostolate to flatter a person's vanity,—to be the bearer of a divine message, a prophet, someone who is in the know about the most important thing of all, can induce an attitude of exaltation which verifies the dictum of St. Augustine that the peculiarity of pride is that it creeps stealthily in, corrupting even good works. Yet the apostle is confessedly asking for thorough-going submission to a truth which is not his to control, and to standards of conduct by which he himself must be judged, and to a truth which demands acceptance first and foremost because it is true, the word of God who cannot deceive or be deceived.

Amen, Amen, I say to you : I, the Amen, the fixed immutable first truth, demand that you amen, or stablish yourself in me. To be able to defend and propound doctrine in that spirit of self-effacement, to be so objective that nothing of yourself comes between the personal speaking of God and the human being whom through your instrumentality God is calling to the relationship of a grace child, that task surely calls for all the intellectual discipline which the most highly trained scientist can muster. Even so, the scientific approach is not without its own art.

A successful piece of research whether medical, mathematical or of any other kind has a beauty which shows it to be not only good science but good art. There was an old scholastic dispute as to whether Logic was a science or an art. It still finds its place in the textbooks and I hope it will continue to do so. It reminds the abstract scientist that the very instrument of his thought has a quality of pleasing when heard, for I take it that we may take St. Thomas's definition of the beautiful as that which pleases when seen, in a wider sense than the purely ocular. Logic is essentially a science, a science of the rules of thought, but implicitly it is an art as well—for these rules result in the construction of good reasoning, which has its own austere but genuine beauty, as those who heard yesterday afternoon's lecture may well agree. And surely we see here just the balance that is needed in the presentation of revealed truth in a manner suited to the scientifically trained mind. We said before that the apostle must be careful not to distract his hearer from the core of what he is trying to convey. We must add that he must not insult his message by presenting it unworthily, in muddle or in vagueness. There is art lurking in science ; it is certain that the art of winning souls must chiefly rely on ordered knowledge of a scientific character. And here I should like to draw a comparison between certain gifts which go with the practice of natural scientific thought, and some characteristics of the Christian life, and apostolate. It was remarked on yesterday by one of the questioners that long habituation with natural science may breed a blindness of mind to other aspects of truth. Perhaps it will be agreed that it can also breed a remarkable insight into the matters being investigated. This we may partly ascribe to the habit of applying readily the scientific principles which they possess. But there come times for any serious and constant investigator, and especially for any investigator with a spark of genius, when he does something more than apply his habitual principles in the usual humdrum pursuit of what a chemical friend of mine called bullying recalcitrant nature, and with a sudden thrust of insight which he can even feel to be approaching before it comes, pierces to a new conception of the truth.

Now the same facility of understanding is found in those who have a well developed sympathy for their fellow creatures. Without

neglecting, and indeed helped by, the ordinary rules of prudence and psychology, they can at times of necessity put their finger on the spot with a suddenness and infallibility which surpasses the normal scope of human awareness. These powers of scientific and human penetration are paralleled in the supernatural life by the gift of understanding, called a gift of the Holy Spirit, because it is developed through the sympathy for divine things bred by the exercise of charity. And this gift besides endowing its possessor with some degree of penetration of the obscure truths of faith, also enables him to assess them at their own proper relative value and to discern their due cohesion and order. Now if we may imagine an apostle versed in the ways of science and who has not failed in his human responsibility by growing remote from the ways of men, and who is bent on devoting his natural gifts to such service as they may render God, it is not extraordinary to suppose that the gift of understanding which everyone in a state of grace possesses in a rudimentary form, may be manifested to a more noticeable degree. A combination of the natural and supernatural understanding must be brought to bear in any given instance of the apostolate: so that the correct balance is given to the complex of doctrine, and the balanced whole is given on a scale suited to the hearer's grasp. But always the truth must come first; the art must grow out of the recognition of all the factors involved in the situation, namely doctrine to be declared, persons in a given situation of time, place and development.

Another gift which we may expect the scientific apostle to display is the gift of counsel. This gift is both one of giving advice and taking it. No scientist can be unaware of the debt he owes to other people, and I suppose that the more brilliant his discoveries are, the more command he has of his subject, so much the more if he is honest and true, will he realise that his work has been prepared for him by generations past, so that his own contribution will seem to him as nothing in comparison with their labours from which he has but educed the natural fruit. Whatever the opinion of his neighbours, he will put down on the credit side of his account, as an asset for which he is indebted to others, all that body of scientific instruction and investigation to which he is the heir. He will take very little credit for others being indebted to him. Once again, in his use of the gift of receiving good instruction and advice, on the natural or supernatural plane, the scientist will be seen in self-effacement before the truth which is not his private production or his private property. That attitude should be conspicuous in the apostle—who is glad and anxious to share the truth of God revealed to mankind, but having the gift of counsel will be enabled to find ways of imparting it suitably and graciously and winningly, not satisfying his hearer's needs from adventitious sources, but with the truth

itself which holds the answer to all their needs ; for it is the manifestation of the First Truth who is also the Supreme Good.

You may think that I am depicting our scientist apostle as someone of very fine character. I am. He needs to be. He must be above all imbued with the spirit of science or knowledge as it is sometimes called, with the *donum scientiae*, that gift of the holy Spirit which brings one to judge of the infinitely small worth of created things, not excluding oneself. The vain knowledge beloved of the world, referred to in that passage of St. Paul which Dr. Sherwood Taylor quoted yesterday morning, is often concerned to judge of the enormous worth of infinitely small things. Not so the knowledge of the Spirit which helps one to keep in due perspective even the whole entrancing world of the pursuit of natural science.

With those three examples I shall close my comparison of the scientific and the apostolic life. My method has been to dig down for certain characteristics common to both, to wit, the pursuit of truth to be discovered, co-ordinated and manifested, through the use of observation, reason and understanding ; and a sense of social solidarity gained in the reception of instruction and its further transmission. The parallel might be extended much further to cover a host of natural and supernatural virtues, including those rooted in the will such as hope and fortitude, but I have preferred to confine myself to the directly intellectual side of the matter, as more illustrative of the way to answer this particular question. By showing the possibility of finding some basic qualities of the scientist in the supernatural order, I hope that I may have lessened that sense of isolation with which some scientists find themselves afflicted when they discover that a quite legitimate question : What contribution can my work possibly make to the building of the body of Christ ? has become for them a problem.

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EDITORIAL NOTE

All contributions submitted to the Editor must be typed and be accompanied by a sufficiently large stamped addressed envelope—stamps (or Post Office coupons from abroad) alone will not suffice. Articles so submitted should be concerned with matters of general interest, and be the fruit of expert knowledge or original research. They should not ordinarily exceed 3,000 words, and must be intended for exclusive publication in the "Month," if accepted.

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SCIENCE AND OUR SOCIAL RESPONSIBILITY

OTHER speakers at this Conference have put before us in expert fashion a history of the Church's early association with, and subsequent partial estrangement from, Science, together with some discussion of the cause of that estrangement, with particular reference to the physical sciences. It was noted that the rapid and almost continuous advance of the "exact sciences" seems almost to date from the moment at which Science finally turned her back on the traditional philosophy, cherished by the Church as her own. And indeed I think that no explanation of Science's sudden leap forward could be regarded as adequate, which did not take account of her "emancipation" from the philosophy of those somewhat degenerate exponents who were not big enough, not alive enough, not sufficiently avid of the truth, to take due cognisance of the wealth of new facts of observation which were then being made available.

Science's luxuriant progress and achievements do seem to be a stumbling-block for the metaphysician and a triumph for the Materialist and the Positivist who rejects metaphysics. Greatly daring, in the course of the discussions, I suggested that such luxuriant progress, *within its own field*, might well be expected from Science from the moment at which it felt itself free to neglect, or even to deny, the reality of everything that was not concrete, material and quantifiable. It is as though a man were entrusted with the task of finding twenty red-headed, kind-hearted policemen. If he neglected part of his task, he could make great progress with the remaining portion of it. He could say: "I don't believe in kind hearts anyway—but here are twenty red-headed policemen." It would be a successful and rapid solution of the task as he proposed it to himself, but not of the task as it really was. Similarly, in the last resort, the mind as scientific seeks the truth because it is good. But if the seeker states or pretends that the only good is material good, and that that alone is true which subserves physical satisfaction, he will make rapid progress within the field of his enquiry—the more so since his success will place mankind in possession of easily-won material goods which will dull the sense of other values, and make men clamour and press him for more, and reward him richly when he produces them.

I cannot pursue this subject as far as I should like to. But I suggest that when such specialisation is absolute and assumed as an adequate rule and aim of life (as it has been), then, regarded

as the activity of a human agent or a society of human agents, it is an incomplete, maimed, disproportionate form of activity which flourishes indeed exceedingly, but which flourishes *at the expense* of the other human realities which have been either methodologically neglected, or even vitally denied. In other words, progress in material science does not *necessarily* connote progress in the scientist or in those he works for, considered as human agents, as *men*. A society, or a nation can go forward in material science and yet go disastrously backwards in the things that are human. The exuberant onrush of applied science before the war was taken as cogent evidence by those who maintained that an increase of scientific knowledge necessarily brings real human progress in its train. Some of these indeed appear still not to be disillusioned in the matter, but the majority of thinking folk are now being driven, however unwillingly, to admit that not all change is change for the better, that not all movement is forward movement, and that society and the nation can retrogress.

War found us pitifully, scandalously, under-armed and under-equipped in the material order. But this was as nothing in comparison with our spiritual deficiency and under-equipment as a nation. Increasing concentration on material "progress" had rotted the soul of the nation badly—and it is only now in retrospect that we begin to see how far the rot had gone. The rot had gone further and deeper in another sister nation, the great and beloved European culture of France—or at any rate the enfeebled organism had to bear a sharper impact than we were called upon for the moment to sustain. We saw toppling, crashing ruin with troubled eyes; and though the apostles of inevitable progress may have bleated: "It can't happen here," the nation looked into its own soul, and didn't like what it saw. And at a moment when it was *materially* speaking madness to resist the onslaught further, we yet mustered something from the depths of our souls which the rot had not destroyed, and something in us, which H. G. Wells and the Positivists can give no account of, stood between the world and final darkness.

Since then, thank God, that something within us has been coming to life again with amazing rapidity, though it may still be doubted whether it has yet attained a stature which will fit us for the ordeals which still await us, and it is quite certain that our development is as yet nowhere nearly adequate to the Herculean but exalted tasks of peace and reconstruction. Men are now saying: "Never again." They look back to a pre-war world, already a dim unreal memory, in which you could buy oranges and pineapples and 10-pound joints, get a seat in the train, drive the car to the sea for the weekend, visit your friends, get your watch mended, have your house painted, know with fair certainty that your office would still be there when you arrived up at the City in the morning, etc. On that ordered,

tranquil, secure world, men are looking back and saying : " Never again " ; for in spite of all its seeming order and cohesion, they realise now that it had the seeds of death and ruin and disintegration within it.

Everything in the old order was ordered and efficient, clean and tidy, regular and automatic, except *Man*. And Man was just the one entity that science had most neglected. Oh, of course science had been interested in the material side of Man—in his flesh and blood and bones, his lungs and skin and heart, his glands and their secretions, his nerves and their interconnections, the bacteria which infested him, the foods which nourished him, the vitamins which regulated his metabolism. But Man himself, and especially man as an individual, was not an object of scientific knowledge ; by the positivistic canons, there simply wasn't any such thing ! True, psychiatry had begun, amid hoots of derision from the rest of the medical profession, to make some systematised study of man's emotional life and its derangements, but here again progress was only achieved by neglecting man's most specifically *human* properties, so that the true wholeness-aspect was lost sight of. But we are now at last beginning to see that it was the workman and not the tools which spoilt the job. The fault was not with the things man *used*, whether his own body or the material things outside him, but with man's misuse of them.

Man has therefore come back to the centre of attention—with a special emphasis on the *common* man, i.e., on the great masses of the people who are without privileges of position, class or wealth to an extent which materially determines their life-course. The emphasis is, moreover, on man as *social*—indeed there is a marked and dangerous tendency, as we shall see later, to forget the *units* of the social organism, namely the individual and the family. The planners of the future are arguing with a good deal of plausibility, and indeed with a claim that can be partially justified, that Man himself can be the object of scientific enquiry, and that the same methods which have been so successful in bringing order, utility, stability and progress into the material order, can also be exploited for the same purpose in the social order.

What then are the methods of Science as applied particularly to practical affairs ? First among them I should place an accurate and exhaustive description of the problem to be solved or the aim to be realised. An adequate presentment of the problem often takes one three-quarters of the way to the solution. Indeed in mathematics the solution itself often emerges at once from a complete symbolic statement of the various conditions which the solution must satisfy. A sharp, clear-cut requirement has nearly always preceded applied or technical advance. Thus the requirement of communicating easily, rapidly and cheaply with others at a distance was answered

by the introduction of the electric telegraph ; the requirement of dispensing with the use of wires over very long distances brought us radio-telegraphy ; the requirement of dispensing with the cumbersome coding and decoding involved by the use of Morse symbols was met by the introduction of speech-modulation of radio signals ; the submarine menace brought the depth-charge ; the magnetic mine brought the degaussing circuit, and the need of aerial interception at night was met by the introduction of radio-location. Now there are obviously many desiderata with regard to Man and Society which we can posit with equal clarity.

Having given clear and complete expression to the problem to be solved, the next step is to survey the existing field of scientific knowledge and discovery to see what portions of it have relevance to the solution of the practical problem. Here there is an immense field of well-established scientific knowledge, fully authenticated on a basis of research and repetition, which we have scarcely begun to apply to Man and Society, but from which immense advances may be confidently anticipated. Hence it is that we are beginning to hear a great deal nowadays of "Social Biology," "Social Medicine" and the so-called "Social Sciences" in general. We may well ask what precise meaning attaches to these terms, since it would appear that scarcely any department of human knowledge is without its relevance to the needs of man and the structure of society—even the art and technique of selling matches in the street is not without its social and scientific implications. There are, I know, wiser heads than mine endeavouring to work out a definition of the terms "Social Biology," "Social Science," etc., and so, as one less wise, I will content myself with sketching out certain portions of the vast field which the definition will have to cover, by indicating certain topics of a scientific character which have special relevance to the needs of man and society.

In this vast field of social science, I feel that Catholics, and especially Catholic graduates and others professionally equipped, are destined to play a special part and to bear a special responsibility. Before I go on to deal with some of these specially relevant topics in detail, I must state clearly and with no ambiguity why it is that *Catholics* have such an immense responsibility in this matter at the present time. Social reconstruction is concerned with MAN as an individual, in his relationship to his world, and in his relationship to his fellow-men. The problems presented by the requirements of reconstruction cannot even begin to be solved unless and until those problems are *formulated* in set and precise terms. Now problems affecting Man cannot be adequately formulated, nor can the conditions to be fulfilled by their solutions be enumerated, unless we know very precisely, very accurately, what the word "Man" stands for.

What is man? What should man be? What may he become?

What is he aiming at, what is he *for*, what is his purpose, what his end? What is the norm or standard or criterion by which the human scene is to be judged? There is only one agency on God's earth that can answer that question fully, adequately, certainly and authentically—and that agency is God's Church. Under the Old Law, David asked the same question: "What is man that Thou art mindful of him, or the son of man that Thou visitest him?" The answer came centuries later in the New Law: "And the Word was made flesh and dwelt amongst us," and gave meaning to David's own foreshadowing of the answer: "Thou hast made him a little lower than the angels, Thou hast crowned him with glory and honour." The glory and honour with which God has crowned His creature man, is nothing less than divine grace itself, by which man is made really and truly a son of God, a "member of the household of heaven," and a "partaker of the divine nature." This is Man's end and destiny; this is what he is *for*, and the adequate formulation of every problem affecting Man must have reference to this truth. There is no matter of conjecture here—unless this point be recognised, the planners can have no aim, the attainment of which can fully harmonise and integrate the human family; in fact they are seekers in the dark, unable to formulate their own problem.

We have the full authentic answer to that question: "What is man?" and that answer has very wide-ranging implications in the whole field of social study, be it medical, psychological, economic, educational, political or administrative. But these implications need working out and presenting in a form which will secure the attention of specialists in the various fields; and that means work, *hard* work, work for the Newman Association and its various Sections. The rich treasury of the Faith contains the solution of the problems affecting Man at all times—that is certain. But much hard work is required to quarry those solutions out of the vast rock of Truth, and it is those who are best able to formulate the problems or to understand their formulation by others who are evidently called to the work in these days. It is understandable that we should be to a certain extent parasitic on the scientific endeavours of others, for we live in a co-operative world; but we must not be *entirely* parasitic, for many of the more important implications of the Faith would thus remain undisclosed and progress rendered impossible.

I proceed now to mention a few of the topics relevant to Social Science, in which we as Catholics are, or should be, specially interested:

EDUCATION.—Since we are obviously aiming here at the production of good men and women, the whole procedure must be governed by the requirements of human nature as such. Such requirements can never be met by mere instruction, and yet there can be little doubt that, since the introduction of compulsory education, merely instructional methods have supplanted real educational methods to a very

large extent, with the disastrous results we see to-day. To the extent to which we fully understand our own aims in education, we must remain profoundly dissatisfied with even the best projects which have so far been put forward by the Government, somewhat sourly amused at the glib way in which the word "efficient" is bandied about, and frankly amazed at the bland assumption that Whitehall in virtue of its own resources is competent to say what education is or should be. Perhaps we are so incensed at the financial injustice of the new proposals, that we are in danger of losing sight of the basic reason for which we insist on Catholic schools for Catholic children. Surely it is because we wish our children to be educated as well as merely instructed, and are aware at the same time that education impinges on the *whole* man and that religion alone is the adequate principle of human wholeness. We owe it to ourselves and our generation to work out in detail and demonstrate the educational implications of the truths of our Faith, and one rejoices to know that a beginning of this work has already been made in several quarters.

YOUTH SERVICE AND ADULT EDUCATION.—Here is a vast new field opening out, in which real education and cultural values will obviously be of far greater importance than mere instruction and the mediation of knowledge. We have resources for work in this field that others have not got—we can set up the spiritual background of which others feel the need so keenly and yet do not know how to supply. We have an opportunity of giving a lead here, a lead which will be deeply appreciated by many fine workers in this field outside the Church. But that lead will never be given unless we equip ourselves by training to bring our spiritual contribution into relation with expert knowledge of all that is best and most valuable in this field. Here again a promising beginning has been made in several quarters, but the field is so vast, that it can absorb very much more effort than has as yet offered itself.

SOCIAL ECONOMICS.—Here is a subject much engaging men's minds to-day, and inevitably destined to engage the very serious attention of our legislators before the world is much older. The whole field is one which must evidently be governed by ethical considerations as well as those of practical expediency, and the Church is the authentic guardian of ethics and morality as she is of the Faith itself. But it is not enough for us merely to enunciate the unchanging ethical principles by which human conduct must be regulated; we must in addition become so expertly acquainted with particular problems in this field that we are able to apply those ethical principles to the situation as it here and now exists, with all its complicating circumstances and practical exigencies, so that our comments and solutions will demand the serious attention of those whose business it is to plan and legislate. Here again, expert training and hard work are called for.

INDUSTRIAL CONDITIONS.—Quite apart from such things as economics, social justice, labour administration, collective bargaining, etc., the industrial field presents a variety of problems of a scientific nature to which religious and spiritual factors have clear relevance. Recent surveys have revealed the fact that, even in well-run industrial undertakings, there is a large number of workers who are more or less disadvantaged, and whose efficiency and well-being are to a greater or less extent impaired, by remediable psychological conditions such as chronic anxiety or depression. There is reason to think that the proportion of such cases among the industrial population as a whole may be as high as 20 per cent. This major social problem, to which neither Government nor industry appears to have given serious attention yet, is one which should specially claim our interest. It has been the fashion in the past to explain these pathological fears, worries and depressions as the outcome of the sense of economic insecurity which afflicts the modern worker, and there is no doubt a certain amount of truth in the contention. But anyone who studies these cases carefully and intimately will soon discover that it is a deeper and more fundamental insecurity which is the source of these fears. Man deprived of his God is bound to feel fundamentally insecure, and it matters not that he may "rationalise" his fear by some secondary attribution. Many of us do not seem yet to have fully awakened to the fact that fundamental disturbances in the order of the spirit may have, and indeed must have, palpable and observable effects in that portion of the order of human behaviour which is available to scientific treatment and investigation.

THE POPULATION QUESTION.—During a period in which the child population has fallen by some 2½ millions, the number of dog-licenses issued annually has risen by some 1½ millions, as I am creditably informed. While we spend £3 million on maternity services, we spend £12 million on bloodstock and £450 million on drink and tobacco. It is said that the net reproduction rate of the white races before the war (with the possible exception of Russia, for which we have no reliable figures) was seriously below that required to keep the population at its present level. The implications of this fact are far-reaching, and are to be the subject of a Royal Commission, of which however, up to the time of writing, only the Chairman has yet been appointed. We lack any knowledge going much beyond the conjectural as to the shares which voluntary and non-voluntary factors have in producing this fatal decline; but evidence is accumulating to the effect that non-voluntary factors are concerned to an extent hitherto unsuspected. There seems in fact to be an increasing infecundity in individuals, and a strong case can be made out for the view that this is intimately connected with the divorce between our modern standards of life and Christian ascetical principles.

DELINQUENCY AND THE SOCIAL MISFIT.—The proportion of social

misfits in our population constitutes a social problem of considerable magnitude, especially when it is remembered that their supervision, and the effects of their deviations of conduct, engage the whole-time attention of very large numbers of highly trained normal individuals. A large number of delinquents, and such irritants to the body politic as prostitutes and the promiscuous, are persons of subnormal intelligence or afflicted with some other psychological disability such as emotional instability. In some countries, where an enlightened scientific outlook has been combined with the mighty spiritual resources furnished by the Faith, outstanding success has been achieved in this field. The Bethany method is an example in point—but how many know of it in this country? Here is another field in which we can give a lead, but that lead calls for scientific information and training, as well as good will and supernatural devotion.

THE SCIENCE OF THE FAMILY.—We have had our attention called insistently to the importance of the family as the vital constituent cell of the social organism. Now there is obviously a wealth of scientific knowledge that can be applied to the betterment of family life, psychological, economic, sociological, mechanical, medical, hygienic, nutritional, pedagogical, etc. In the family we have what is indeed known technically by the philosopher as a “natural society,” but the society set up by the fulfilment of a Christian marriage is, in a sense, a supernatural society as well. The family is, in a sense, the constituent unit of the Church, as it is of civil society, and its complex of interests and aims forges a real link between the Church and civil society. Science can help the family enormously at the hands of those who know what the family really is; it can inflict damage almost without limit at the hands of those inspired by a spirit of mere Naturalism.

Many other topics of similar importance could be discussed in this connection: the Beveridge proposals; State medicine; housing; State encroachment into control of universities and higher studies; rural settlement; international co-operation; etc. In all these fields of inquiry, the Catholic who is professionally equipped has much of value to offer, and a contribution is awaited from him that cannot be made from any other source.

CO-OPERATION.—In this country the unfolding of history at this time finds us as a small, though not very small, minority embedded in a non-Catholic and largely neo-pagan matrix. Humanly speaking, this state of affairs is likely to endure at least for some generations—our apostolic intent must continue unabated, but we have no means of foretelling when Almighty God will send its realisation. Meanwhile, we have to live with these people and they with us. Not on a basis of open warfare (we are of course at war with the world and its materialistic principles, but not with the vast majority of the people of good will within the world), nor on a basis of mere mutual sufferance,

but on a basis of genuine and ready co-operation in all fields which do not endanger the principles of our faith and life. We have to give of our best, and be ready to receive the best that others are willing to give us ; we have to live and work and advance together. Obviously all sorts of difficulties of adjustment come up here, but none that cannot be solved by good will on both sides. In many directions, that good will is obviously increasing ; the non-Catholic world has always *needed* us—now it is beginning consciously to *want* us. It is with these thoughts in mind that the Newman Association has thought it proper to urge its members to join such bodies as the Union of Scientific Workers, the British Association, and the various learned societies catering for more specialised interests.

I am anxious to avoid giving the impression that little or nothing has yet been done in the important fields to which I have called attention. The University Catholic Federation, through its two branches, the Newman Association and the Union of Catholic Students, has for some time been devoting a good deal of attention to these questions. Even to detail what has been achieved and what is now in hand would take this lecture far beyond its compass. But it is worthy of mention that the Newman Association has specialist sections working on many of these problems, and hopes that those of its members with specialist interests and qualifications will put themselves in touch with the work of these sections. There already exist an Education Section, a Science Section, a Social Science Section, a Medical Section and an International Section. Sanction has been given for the early formation of a Psychological Section. A recent advance has been the aggregation to the Social Science Section of a Professional Social Workers' Committee to which may belong Catholic Probation Officers, Welfare Workers in industry, Moral Welfare Visitors, Mental Health Visitors, Psychiatric Social Workers, Settlement Workers, Rescue Society Workers, Hospital Almoners, V.D. Clinic Almoners, Public Assistance Officers, etc. The deliberations of this Committee have already confirmed the view previously held, that, while invaluable work has been and is being done by voluntary and part-time untrained workers in these fields, yet the times now call for a high standard of scientific training for those engaged in these important social activities.

J. LEYCESTER KING, S.J., Ph.D.

*Professor of Rational and Experimental Psychology at
Heythrop College, Chipping Norton.*

OUR CONTEMPORARIES

- AMERICA** : January 29th, 1944. **The Church in Latin America**, by Richard Pattee. [A critical article which maintains that Catholic opinion in Latin America has been far too defensive with the consequence that there has been a marked decline in Catholic influence on present-day issues.]
- BLACKFRIARS** : March, 1944. **Thomism To-day**. [A symposium on Thomistic thought, introduced by the Archbishop of Canterbury's address to the London Aquinas Society and followed by a commentary on that address, by Fr. Victor White, O.P.]
- BROTÉRIA** : December, 1943. **As Escolas Católicas na Inglaterra**, by A. Rocha. [Some Portuguese reflections on H.M. Government's White Paper and Education Bill, with a discussion of its clauses affecting Catholic schools.]
- CATHOLIC WORLD** : January, 1944. **This Business of Understanding Europe**, by Francis Stuart Campbell. [The writer examines the different channels through which information about Europe flows to the American public : he concludes that "the result is calamitous" and that the United States "is going to face a defeated Continent as dark and as enigmatic as Africa before the days of Stanley and Livingstone."]
- COMMONWEAL** : January 14th, 1944. **The Party Line in France**, by Paule Berault. [A timely study of the many tactical changes in French Communist policy between 1939 and 1944, starting with sabotage and opposition to the French war effort and ending with full Communist support for General de Gaulle.]
- GRAIL MAGAZINE** : No. I, 1944. **The Sacrifice of the Mass**. [Containing several short articles on the Mass, tracing its evolution and stressing its implications.]
- HOMILETIC AND PASTORAL REVIEW** : February, 1944. **Education with or without God**, by Joseph Przudzik. [Some notes on the position of Religion in Education and on the attitude of modern educational authorities in the U.S.A., with optimistic conclusions drawn from a "Religious Survey of the University of Nebraska, 1941-1943."]
- IRISH ECCLESIASTICAL RECORD** : March, 1944. **The Early Drama and Corpus Christi**, by H. Gaffney, O.P. [In a well documented article Fr. Gaffney argues that the Feast of Corpus Christi "gave a wonderful impulse to dramatic growth throughout Europe" and that the Corpus Christi Office showed "a curiously strong affinity with the medieval drama, while of course possessing a dignity and a reality which the drama did not claim."]
- SIGN** : February, 1944. **America's Philippine Victory**, by Carlos P. Romulo. [Maintaining that a wise American policy in the Philippines has won the hearts of the Filipinos for the United States. The author, Colonel Romulo, was A.D.C. to General MacArthur in Bataan, Corregidor, and Australia.]
- TABLET** : March 11th, 1944. **The Road to Serfdom**. [A timely editorial, taking its title from Dr. Hayek's recent book and emphasizing the danger of the drift towards the Servile State : it warns us that, in order to combat German National-Socialism, we must not introduce a British variant of the same evil.]

REVIEWS

MONASTIC ADMINISTRATION¹

THE history of the priory of Christ Church, Canterbury, begun by the monks themselves in chronicles, letters, and business papers, and carried on by a succession of scholars, is still far from complete. There is need for further research covering all the interests and activities of an important religious house. The monks of Christ Church, established there by St. Augustine himself, and, after a few vicissitudes, in firm possession of the Cathedral Priory, were one of the more important communities in medieval England. Though small in comparison with continental communities, they numbered, on an average, almost a hundred. They had large estates. They were in a position of special importance from their close relations with the archbishop of Canterbury. Some of their priors were men of outstanding character and ability, most capable in administration, and keen and successful in reform. After the martyrdom of St. Thomas of Canterbury, the monks were particularly concerned in the cult of the saint and the pilgrimages which were part of it. And for long periods the house had considerable political influence.

In so wide a field, the work is for specialists. Much has already been done; and we have partial histories of the early community at Christ Church, of the relations, not always easy, between archbishop and monks, of the Cathedral and Priory buildings, of the political influence of the monks, of the devotion to St. Thomas and the pilgrimage to his shrine, and of some of the more distinguished priors. The latest specialist in the field, Dr. R. A. L. Smith, deals with the financial administration of the priory. After the archbishop ceased to be the *de facto* abbot of the Christ Church community, the possessions of his see were separated from those of the monks, which were then wholly the concern of the religious. Land was their chief property, and they drew their chief revenue from it. There were, besides, lesser sources of revenue such as advowsons and appropriated churches, and offerings at the shrine of St. Thomas.

The landed property of the monks was mainly in the south and east of England. Together with their other property it needed expert management, for the sake of the financial soundness of the house and also for the spiritual health of the foundation. A house in serious and continued debt was not in a good spiritual state. For purposes of administration, Christ Church priory set up a central council of monks for the audit and allotment of revenues. Their system is strikingly similar to the royal administration of revenue by Exchequer and Treasury. Inside the monastery, the work of administration was divided amongst the obedientiaries, three of whom, the cellarer, the chamberlain, and the sacrist, were early entrusted with the administration of revenue. Outlying manors belonging to the priory were supervised by monks known as wardens, whose work was controlled by the central council.

In addition to the monks engaged in the management of the monastic estates, there was a large number of laymen concerned in it. The priors,

¹ *Canterbury Cathedral Priory: A Study in Monastic Administration.* By R. A. L. Smith. Cambridge University Press. Pp. 237. Price, 15s. n. 1943.

notably that remarkable manager, Henry of Eastry (1285-1331), maintained a prior's council of local magnates and legal specialists from whom, in return for favours and pensions, they expected technical advice and the pulling of strings. The manors had a resident serjeant, the prior had his own household, the obedientiaries had a special staff of servants—so many servants, indeed, that in the later days of the monastery the servants outnumbered the monks by two to one.

It was no easy business to run the priory and its estates. There were frequent troubles from famine and plague. The prior and his council had to plan their economy according to the fluctuating yield of their arable land: they had to decide on the time and amount of borrowing from the Jews and the Italians, to choose between arable and pasture farming, to undertake marling and other means of fertilizing their land, to reclaim marshland by embankment and drainage, and to deal with the problems created by shifting of population. It is a great credit to them that for the greater part of their history they kept their great foundation solvent.

Dr. Smith's study is an excellent piece of scholarship. Its primary purpose, which it serves very well, is to give the administrative history of one religious house. But its appeal is by no means only to the specialist in economic history. The study of monastic accounts is so fully and attractively presented that the reader has a most interesting and instructive picture of monastic life in the Middle Ages, its economic background and organization, the share it took in the royal administration, its relations with people of all classes, its theory and practice of almsgiving, and much else. The teacher and the student of medieval history will find this book well worth reading.

W. L.

CATHOLIC IDEALS IN EDUCATION¹

FATHER LEEN limits himself in his treatise on Education to the work of the school; and towards the success of that work he has many valuable suggestions to offer. His subject is not Instruction nor Paedagogics but Education, and he makes a bold start in his Introduction by offering a definition of that much-abused word. "To the Christian, 'education' is that culture of the mind, the will and the emotions, which, whilst adapting a man for the exercise of a particular calling, disposes him to achieve an excellent personal and social life within the framework of that calling." Education, as the successive chapters show, is concerned with success in life, with literature, with the arts and sciences, with philosophy, but it is not confined to any or all of these, and the author makes a strong plea for a wider and deeper conception of the purpose of schooling than is to be found in this country—or, for that matter, in Eire—to-day. He deprecates, for example, the pursuit in the study of the ancient classics of form for form's sake, and urges the inclusion of Christian no less than of pagan writers in the curriculum. He condemns a system of religious formation which is based on sheer catechetical instruction, however admirable the catechism itself may be; and here it is interesting

¹ (1) *What Is Education?* By Edward Leen, C.S.Sp., M.A., D.D., D.Litt. London and Dublin: Burns Oates & Washbourne. Pp. 251. Price, 10s. 6d. n. 1944.

(2) *The Catholic Church and Education.* By M. O'Leary. London: Burns Oates & Washbourne. Pp. x, 113. Price, 5s. n. 1944.

to follow him along a line of thought which in England led some years ago to the drawing up of the syllabus of Religious Instruction by the Conference of Catholic Colleges. And he is insistent that a place must be found for philosophy; not the dry bones of the traditional scholastic textbook, but a live course which shall help the student, not only to *know* the faith, but to *think* it.

"Dogmas of faith must become dogmas of life." Father Leen is obviously much exercised with the problem of the "leakage," the appalling ease with which one brought up in a Catholic school and in Catholic surroundings may suddenly abandon the faith. And he is equally aware of the allied scandal of the many in whom we find "an assiduous practice of religion coexisting with ideas on problems specifically human, that are at variance with the theory of human life that the Catholic faith implies."

This problem of the "divided mind" he states and faces boldly; and there can be little doubt that the type of school training he advocates, crowned by an initiation into philosophy, "having its inspiration in Scholasticism and its dress in the language that passes current in modern philosophical writings," would take us a long way towards its solution.

Here we may express the regret that Father Leen has not taken a leaf out of his own admirable book and tempered somewhat the severity of his scholastic approach; for it cannot be denied that the book carries an air of extreme dogmatism. There are few references to his fellow labourers in what is after all a much tilled field; and we fear that those who do not share his faith may be chilled alike by the bleakness of his style and by what may strike them as a narrowness of sympathy which confines the author's field of vision almost exclusively to the Catholic field. This is a pity; for while Catholics have much to teach the non-Catholic English speaking world in the sphere of education—and there are in this book the makings of an excellent exposition of that teaching—we have also much to learn; and the lack of reference to the valuable educational work, both theory and practice, that has been done by non-Catholics must limit the book's appeal and usefulness at least in this country.

Mother O'Leary, on the other hand, casts her net wide; there is scarcely a page that does not reveal her intimate acquaintance with all the main currents of educational thought in Europe; and she approaches them all with the sympathy that unlocks their secrets. Moreover, where Father Leen lectures, she pleads; and her plea is for emancipation, the emancipation of secular learning from its self-imposed blinkers, and of religion from the artificial restrictions with which the modern world has hedged it around; and these are seen as facets of the emancipation of the human spirit from its own limitations and self-treasons, under the expanding and vivifying influence of the Catholic Faith, and of its transformation through the gift of Supernatural Life which is the Christian inheritance. "The sins of Christian education," writes Mr. Christopher Dawson with refreshing candour in a short introduction, "are both higher and wider than anything the world has known"; and it is not the least merit of Mother O'Leary's work that it combines a consciousness of past and present failures with a burning conviction of the supreme value of a Catholic education rightly conceived. She leaves the reader with the realization that all the things about which we are most worried to-day, administrative systems, school buildings and equipment, government grants and the rest, are not the things that really matter, and that in our pre-occupation with them we are failing to see the wood for the trees. For

education is of the things of the spirit ; we have to recapture the Christian mind, which is no other than the mind of Christ Himself.

Of this fundamental aim the author never loses sight. But neither does she allow the lesser educational purposes to be submerged in any uncritical yearning for a lost ideal. True, she casts many a nostalgic glance backwards at the Ages of Faith when education, beginning in the home and continued in the monastic school, was a life-long process, since the influences that determined the atmosphere of the school continued to operate in the society in which the adult was to live. Such an "education by environment" was co-extensive with life ; but it is, alas, no longer possible to-day ; for modern society has no common philosophy of life, and so can exercise no such educative effect, with the result that for many education has been forced down into the school and is confined within its four walls.

But the principles which once found concrete expression in the institutions of a unified Christendom are still enshrined in the Catholic Faith ; our religion will still guide us, if we will follow, towards that coherent philosophic outlook through which we can gather together the scattered strands of our thought and experience into a significant pattern, and so can regain the wholeness of personality and inner harmony which the children of the modern age so sadly lack. It is not that religion is offered as a substitute for learning—nowhere will you find a more ardent advocate of the study of the humanities than Mother O'Leary—but that human learning will continue to flounder, as human nature itself flounders, unless it is "founded upon Truth, integrated into a balanced system, enlightened by Faith and backed by Prayer."

This integration of religion and learning, indeed of religion and life, lies at the heart of Mother O'Leary's message and is expressed in many a revealing juxtaposition—reading and meditation, religion and poetic inspiration, adult education and retreats, to mention but a few. It is an integration that few would claim has yet been achieved even in the most Catholic of Catholic circles to-day. But it is the ideal for which we strive ; and we owe a deep debt of gratitude to the author no less for her realistic estimate of the length of the road we have to travel than for the encouragement she gives us on the way.

J.D.B.

CHURCH HISTORY SEEN THROUGH PRAYER BOOKS¹

THIS is the first of a series of volumes planned to deal with questions of Christian worship and edited by the Deans of St. Paul's and Liverpool. Mr. Stanley Morison contributes this first volume, a study of the various books used in Church services, both Catholic and Protestant. For this task Mr. Morison is admirably qualified. And though he modestly remarks that the writing of the book has been sandwiched in between various jobs of war work, the book is certainly more than adequate for its purpose. Mr. Morison is the author of several works on typography and the history of journalism ; has been typographical adviser to the Cambridge University Press since 1923 and to the *Times* since 1929 ; and was responsible for remodelling the type of the *Times* in 1932. He is, incidentally, a Catholic, having been received into the Church in 1909.

¹ *English Prayer Books*. By Stanley Morison. Cambridge University Press. Pp. viii, 143. Price, 6s. n. 1944.

The volume opens with a brief but clear history of the service books of the Catholic Church in pre-medieval and medieval times. They all receive notice—the *Sacramentarium*, *Psalterium*, *Kalendarium*, *Horarium*, *Rituale* and *Pontificale*. There are interesting comments on the manner in which Missal and Breviary grew out of them; on the Friars' influence on the Divine Office; on the Sarum, Hereford and York rites in medieval England. The author stresses the welcome given by Church authorities to the new invention of printing. Berchtold, Archbishop of Mainz, hailed the "Gutenberg" Bible as a product of a "divine art." The Bishop of Würzburg granted 40 days' indulgence to purchasers and users of copies of the Missal printed by George Reyser of that city. Between 1478 and 1559 at least 250 editions of the *Horae ad usum Sarum* were printed in Britain or abroad, principally in Paris.

With the religious changes of the sixteenth century, Mr. Morison's work is not merely a descriptive record of various service books as they appear; it becomes a mirror and graph of religious history in this country. In 1527 there "ceased the existence of the 'Church in England' and began to exist a 'Church of England'." Yet Henry VIII's first liturgical book, printed in 1541, was a breviary in Latin: *Portiforium secundum usum Sarum noviter impressum et plurimis purgatum mendis. In quo nomen Romano pontifici falso adscriptum omittitur, una cum aliis quae Christianissimo nostri Regis Statuto repugnant*. That the people of England were slow to respond to the new ordinances is proved by repeated decrees against the old Catholic service books, "papistical books, mass-books, processioners, manuels, portes, latten books, and legends and such fayned fables, grailes, couchers, antiphoners, hymnalles and all such peltrie of the Pope's sinful service," to quote but one list, drawn up at Lincoln in 1567.

Attention is given to the many editions of the Book of Common Prayer. Imposed under Edward VI and re-imposed by Elizabeth, the book was suppressed in 1645 and revived in 1662. But with the accession of William III, a Dutch Calvinistic Presbyterian, and a policy of toleration for all Protestants, there came an end to the "Tudor conception of one folk, one prayer."

The nineteenth century brought a revival of interest in liturgy and liturgical books. Ignorance was widespread and profound. Dibdin, though able to appreciate old volumes, confused the Breviary with the Missal. This revival owed something to the Oxford Movement as also to the Gothic revival of Pugin. The study of liturgy had, of course, been kept alive in France by the Benedictines, and the names of Ménard, Mabillon and Martène will not be unfamiliar. William Maskell's "The Ancient Liturgy of the Church of England" "may be said to have initiated modern English study on the subject." Finally, Mr. Morison traces later developments in Catholic and non-Catholic liturgy and examines Catholic books published both abroad and in this country, e.g., by Burns and Oates. He points to the movement within some of the Nonconformist bodies for a liturgical service. As an appendix he includes two specimens of "vocational services," used in the Anglican Church. His argument is that the Catholic Church which authorises so many blessings with proper collects and responses, may well look with favour on such new forms that link religion with work and life. "Perhaps there has been overmuch 'quilting out of Scripture' and overlittle use of the vital and creative contacts of daily worship with daily life. There has, perhaps, been overmuch concern with revivalism, e.g., of the Uses of Sarum, of Lyons, or of Toledo, and

overlitter new expression of contemporary needs." But the two examples he gives in full detail are not impressive.

Mr. Morison's work is admirably done. It is largely a scholarly, if concise, account of liturgical books which are appraised for their material production as also for their importance in the development of liturgy, whether Catholic or Protestant. But, as has already been said, the book provides a running commentary upon the vicissitudes of religious life in England. Historians and liturgists—and what is more, persons that have a little acquaintance with both or either of these subjects—will find it helpful.

J.M.

A HIGHLAND TRAGEDY¹

MR. COMPTON MACKENZIE, reviewing a new translation of Sienkiewicz's "Teutonic Knights," has put the question: What historical novels of medieval life possess any vitality to-day? He dismisses some well-known examples as unreadable, and remarks that one of the tests of fictitious characters is the ability of posterity to recognize human beings under the externals of a bygone age. Judged by this test, Miss Lane's tale of the massacre of Glencoe must satisfy the most exacting critic. The characters are living men and women. Captain Glenlyon, the treacherous guest, his conscience never at ease, the brutal Sergeant Barber, the passionate discontented herds girl are drawn with a sure hand.

The tragedy of Glencoe is a well-known episode, but in Miss Lane's hands, it becomes a story which holds the reader absorbed to the end. The method of the detective story is reversed; the reader's interest is held, not by the uncertainty of the issue of the plot, but because he watches the MacDonald clan, as they unsuspectingly follow the daily round, moving to the inevitable disaster.

Miss Lane's picture of the life and customs of a Highland clan would alone justify the work. But she is not content to be judged as a novelist alone, and sets out in an epilogue to defend the historical accuracy of her story, in its general outline and in many of the incidents. The personal responsibility of William III for the massacre can hardly be doubted; to sanction such a deed was by no means inconsistent with his character.

B. MAGEE.

SHORT NOTICES

BIOGRAPHICAL

There is no more difficult literary form than that of historical fiction, especially when the author binds his imagination closely to the known facts of history. This has been the endeavour of Fr. M. Raymond, O.C.S.O., in *The Family that Overtook Christ* (Kenedy, New York, \$2.75), a series of biographical sketches of the family of St. Bernard. It would perhaps be too much to say that he has been uniformly successful: and there are places where the reader is disconcerted to find the twelfth

¹ *He Stooped to Conquer*. By Jane Lane. London: Andrew Dakers. Pp. 272. Price, 9s. 6d. n. 1944.

century speaking with the idiom of modern America. However, at his best, fact and fiction are convincingly blended, and throughout he contrives to convey the lesson of perfection proper and possible to the Christian life in all its states.

From St. Augustine's Abbey, Ramsgate, there comes a small handbook of 114 pages, entitled **The Saints of the Year**. It is intended as a companion to the Roman Missal and consists of a series of articles that Dom Cuthbert Smith contributed, month by month, to the *Thanet Catholic Review*. The notes are brief and concise, ranging from 3 or 5 to 20 lines apiece; and for some days of the year there are no notes at all. A handy little compendium for the busy Catholic but, even for war-time, the price—five shillings—seems to us excessive.

Violet Bullock-Webster who became **My Dear Mummy** (Mary's Meadow, Ludlow, 10s. n.) was educated by her father who hunted with a pack of fifty hounds; but, also and not a little, one would gather, by her Guardian Angel who was not above giving her a slap, and by those many friends of hers whom she found in Father Bowden's Little Lives of the Saints. These, with the Imitation of Christ as background, which accidentally she found and surprisingly loved, assuredly guided her through the storms and crises of a kaleidoscopic life safely to the Church and eventually to Mary's Meadow. Sanctity and indeed heroic sanctity beckoned, and she never wholly lost sight of her ideal, though it was set upon the mountain tops. Admirers of Mrs. Armel O'Connor's work—and they must be legion—will love this autobiography, which despite its title, it actually is: you feel she likes to write of herself in the third person; and those who, reading it, meet her for the first time, will surely fall under her delightful spell. This life story, told with all her unageing simplicity, gaiety, engaging freshness and vitality, breathes the atmosphere of holiness; and a life so full of God bears His marks of trial, of suffering, of depression; but of bitterness there is no trace. Her account of her marriage, "an ideal Catholic marriage," will give heart and inspiration to many: especially to those who shape their ideal awry and stumble on the stone of incompatibility. No! not the funny book her old hunting friends demanded, though there is much fun in it. Rather a sad life, some would think; but then, as she would say, that is because they don't see things "the right way up"—the way the Angels see them. It is a moving story and makes you thank God, like "Michael," for his Dear Mummy.

No one concerned about the Kingdom of God wherein is neither Jew nor Greek, nor bond nor free, could fail to profit by **Dark Symphony** (Sheed and Ward, 6s. n.): it is the moving life story of Elizabeth Laura Adams, a convert negro girl. The account of her childhood and upbringing at the hands of devoted parents who strove above all to preserve her sunny nature and forestall bitterness and hatred as she met racial hostility is absorbing. It is indeed a fine study of an old-fashioned and, alas, unfashionable, pedagogy. The effect upon the child who later had much to suffer, was enduring; the little girl's spirit was fine, and in the strength of her new found faith, she was undefeated. A "White" may well feel shame at his lack of sympathy and elementary charity: he would do well to forbid himself to use the wounding "word." At least, from this book, he can learn something of the impact of the negro problem in the sphere of personal relationships, and will more easily understand why so many coloured people will have nothing to do with Christianity and look to Communism for light and hope.

DOCTRINAL

Fr. A. J. Clarke, C.S.S.R., tells us that the germ of his book, **The Mass : From Shadows to the Truth** (B.O. & W., 7s. 6d. n.) was found in instructions given to evacuee children. The book itself is intended rather for their teachers and for priests, and they will discover here in small compass abundant matter for their own devotion. It supplies too that background which is so necessary for effective teaching and illustration of this all-important subject. We commend especially the central chapters on "Co-officers of the Mass" and "Our Reasonable Service."

ASCETICAL

The Way of Perfection (Sands, 7s. 6d. n.) is perhaps the best known and the most generally applicable of all St. Teresa's writings. The Saint herself re-wrote the book in later life and it is this, the Valladolid, text which is here very competently translated by one of her own spiritual daughters.

Those many souls who have found help for their spiritual life from the meditations of the late Mother St. Paul will welcome in **Spiritual Readings** (Longmans, 15s. n.), a selection from her published works, arranged according to the Sundays of the year and some of the principal feasts.

VERSE

Mary Winter Were has frequently contributed verses to the MONTH. Recently we have received another collected volume of her poems. They are all short and slight. But she has learnt to sing as a poetess and to delight in colours.

Her robe is as the blue skies
That grace Her month of May,
Her girdle is a daisy-chain
With which Her children play :
Her robe is as the blue skies when clouds are rolled away.

That is one excerpt, and it is obvious to whom the poem refers. Not all her verses are religious, in the strict sense. There are some that dwell on the devastation of war and others that look forward to what is to come. Her general tone is one of optimism, tempered by the realisation that all life must advance through a valley of tears. Mr. Herbert Palmer contributes a valuable foreword, in which he declares :

There is enough in this volume to make clear that Mary Winter Were belongs to the permanent company of Post-Caroline Christian poets, which includes Cowper and Charles Wesley and Frances Ridley Havergal at one end of the pole, and Christina Rossetti and Coventry Patmore and Francis Thompson at the other. Critics and anthologists of religious verses will be at fault if they overlook her.

Laurence Binyon wrote of the book : "I admire the sensitive art, the feeling and the fervour of the poems." The book is **Cross and Shrine** (Sands, 4s. 6d. n.).

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